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Anaphylactic Shock From Wasp Stings

W. H. WILLIAMS, JR., M. D.
Rock Hill, S. C.

A review of the literature of the past thirty-five years reveals reports of eight fatalities resulting from bee or wasp stings, twenty-one cases of severe general reactions, and two with generalized urticaria and exfoliative dermatitis. Other cases of severe general reactions are reported in the foreign literature during this period.

As fatal and near-fatal reactions to the extremely common occurrence of bee or wasp sting may be unpredictable, descriptions of physical signs and symptoms encountered, a discussion of the problem, usual treatment, and a suggested new course of immediate treatment are here presented.

Waterhouse[1] reported the case of a fifty-five year old bee-keeper who had been stung frequently, and in June was stung by five or six bees at once, from which he seemed none the worse. On August 6, he was stung on the hand by two bees and almost immediately began to feel a constriction of the throat and intense throbbing of the head. His face was flushed, eyes congested and his upper lip swollen. There was numbness and tingling of both hands and difficulty in breathing. The patient lost consciousness half an hour after the sting; breathing became stertorous, pulse feeble, and for a few seconds the pulse could not be felt. He recovered consciousness in from three to four minutes, but had a milder attack ten minutes later. On September 2, the unfortunate bee-keeper was again stung by a bee on the upper margin of the right ear. Soon he again began to feel constriction of the throat and difficulty in breathing, and later he collapsed. He was semi-conscious, restless, and exhibited sighing respiration. The right side of his face was congested and swollen. Sweating was profuse; the extremities were pale, cold, and clammy. The pulse could not be felt, and the heart sounds were very feeble. The patient improved slowly. Waterhouse assumed this reaction to be anaphylaxis.

In the same year, 1914, two letters in correspondence to Lancet[2] reported fairly severe local and general reactions to bee and wasp stings.

Bevan[3] reported a party of three stung by a swarm of bees and, on questionable evidence, assumed the severe reaction to be the result of acidosis. Indeed, it has been a general conception that local and general reactions from stings have been due to formic acid, but Benson and Semenov[4] have shown that formic acid is not a component of bee or wasp venom.

Powell[5] and Mackay[6] each reported cases in which their patients had become sensitized to bee or wasp stings and on subsequent stinging, in addition to exhibiting signs of anaphylaxis, developed urticaria and exfoliative dermatitis.

Von Geldern[7] described three members of a family who, on being stung by wasps, developed genital itching, numbness of the fingers, diarrhea, abdominal cramps, and wheezing, all accompanied by marked prostration, weakness, and sweating. The attacks usually lasted about a half hour.

Gibb[8] described a seven-year-old girl who, after being stung by a bee, developed urticaria, sneezing, cough, and moderate flow from the eyes and nose. On insufficient evidence, Gibb attributed this reaction to injection by the bee of pollen to which the child was sensitive. Benson in a microscopic study of bee stingers and observation of the mechanism of the protrusion of the sting shaft, showed that the lancet of the bee is almost entirely free from contamination with pollen.

F. G. Cawston[9] attributed pains down the back of his patient's legs, which developed in addition to prostration and sweating, to the neurotoxins of bee venom. Langer, quoted by Dyke,[13] stated that bee venom has three pharmacologic actions: a neurotoxin, an hemolysin, and a factor attacking the endothelium of blood vessels. Benson has shown that the venom contains an indol, probably tryptophan, choline, glycerol, phosphoric acid, palmitic and other fatty acids, and a non-nitrogenous constituent having an action suggesting saponin. The last is the pharmacologically active principle of bee venom. It may be a dermolysin releasing histamine locally present in the skin.

Fisher[10] reported a bee-keeper's wife who rather

suddenly, developed sensitivity to bee stings, and sensitivity was of such magnitude that if another person, who had been stung by a bee on the finger, would rub his finger on her skin she would develop urticarial wheals. It was also noted that if she came near an old discarded hat of her husband's, which contained many stingers, asthmatic symptoms would develop. Fisher was able to desensitize this patient with gradually increasing doses of an extract made from whole bee bodies. This and Lincoln's[11] case of a severe general reaction following wasp stings with subsequent relief of chronic arthritis lend support to Benson's theory that reactions are allergic in the human from sensitization to allergens inherent in the bee.

Jex - Blake[12] reports two fatal cases resulting from bee stings. One of his cases is illustrative of the development of sensitivity. A fifty-five-year old man had been stung at least a dozen times a year for the past twenty years without general effect. He was stung on the leg and immediately felt very ill, collapsed in two or three minutes, was unconscious, cyanosed, and pulseless for ten minutes, passed urine and feces, struggled violently on coming to, and twenty minutes later was well enough to drive home in his car. During the next nine months he had ten more similar attacks on being stung; each attack was said to be more severe than the previous one. The next to the last attack followed a sting on the forehead. The patient walked into the house and collapsed in one-half minute. He was cyanosed and pulseless for ten minutes. Two hypodermic injections of strychnine were given and the pulse slowly returned. While still unconscious he passed urine and feces, had a violent rigor and dripped with perspiration. He slept for four or five hours and awoke feeling well. The eleventh attack followed a sting on the neck and proved fatal in fifteen minutes. No autopsy findings are reported in Jex - Blake's cases.

Dyke[13] reported two fatal cases of wasp stings in which autopsies were performed. In the first, a forty-four-year old man collapsed and died within twenty minutes of the sting. At autopsy there was an excess of clear fluid in the pericardial sac; the lungs were congested and exuded some bloodstained fluid, but there was no other evidence of disease. The second case died within ten to fifteen minutes after being stung, and autopsy findings were reported as "no disease of any organs or any cause of death other than wasp sting." It was reported that the reaction around the site of the sting was either slight or absent. This is in agreement with Obermayer[14] who, from his own experience, noted absence of pronounced local reaction with the occurrence of severe systemic reactions. It may be assumed that the absence of severe local reaction is due to a measure of vasomotor collapse.

Wegelin[15] reports three fatal cases, two from single stings of bees and one from a single wasp sting. Death occurred within the first hour in two cases and within five days in the other. The latter case developed extensive lobular pneumonia following the initial unconsciousness, and coma persisted until death. The pattern of rapid development of nausea, cyanosis, vertigo, vomiting, pallor, sweating, shock, and coma developed in the three patients. Necropsy revealed hyperemia of the internal organs, edema of the lungs and pharynx, petechial hemorrhages of the skin and mucosa and occasionally of serosa, meninges, and brain. There was also emphysema of the lungs. The first-mentioned changes suggested severe damage to the capillary walls while the pulmonary emphysema was suggestive of an allergic reaction. Though it seems that Wegelin would have two factors causing the pathological changes, it has been shown that hypersensitivity reactions and anaphylaxis may, in themselves, produce such vascular changes[16, 17, 18, 19, 20, 21]. In 1919 Arthus, quoted by Dykes, injected bee venom intravenously into dogs, producing a full picture of anaphylaxis as seen in that animal, and autopsy of the dogs showed congestion of the liver, kidneys, and meninges and hemorrhagic and serous effusion.

Hobson[22] has the most complete available report of autopsy findings in the fatal case of a seven-year-old boy who died within not more than twenty minutes from the time of being stung by from thirty to fifty wasps. The family history in this case was interesting in that the mother of the child was stung by a honey-bee several years before the child was born and soon "swelled all over, her lips being so swollen that they turned wrong side out." Following this she developed a generalized urticaria which lasted two days. The boy was dead on arrival at the hospital; the body was cyanosed and showed no local evidence of stings. Autopsy showed a few purpuric spots on the back, but no edema or evidence of inflammation of the skin. The stomach mucosa showed numerous petechial hemorrhages; also the duodenum, je junum, ileum, and colon presented hemorrhages in the mucosa. The kidneys were markedly congested. The adrenals were normal. There was no gross hemorrhage in the brain, but section revealed marked engorgement of the vessels in the brain substance. Microscopic examination of the liver showed engorgement of the blood vessels; the liver cord cells showed all stages of degeneration. A similar picture was seen in the spleen, kidneys, and gastrointestinal tract. The anatomical diagnosis was: "1. Parenchymatous degeneration of the liver. 2. Parenchymatous degeneration of the kidneys. 3. Ascites, mild. 4. Engorgement and petechial hemorrhages of the gastrointestinal tract. 5. Engorgement of the splenic sinuses. 6. Congestion of the blood vessels in the brain ,kidneys, and liver."

More recent reports of severe reactions to wasp stings are those of Paul and Presley[23] and Helm.[24] Paul and Presley gave their patient, who was in profound shock, oxygen, intravenous fluids, Benadryl (R) intravenously, and epinephrine. Their patient developed a profuse, bloody diarrhea on returning to

consciousness, which seems to give clinical support to the pathological findings in the gastrointestinal tract of Hobson's case. They used an antihistaminic agent because of the histamine-like action of bee venom. This has been suggested by others.[25]

Helm's case showed—in addition to cyanosis, cold, clammy skin, imperceptible radial pulse, absent blood pressure, and rapid, shallow respiration—foaming at the mouth and coarse mucus rales over both lung fields. His patient recovered with external heat, oxygen, adrenalin, and intravenous fluids.

CASE REPORT:

A thirty-seven-year old, six-foot, three-inch, 235-pound painter was admitted to the emergency room of the York County Hospital in profound shock on August 17, 1950. The history as given by the family was that he had been stung on the left hand and forearm by six or seven wasps, following which he returned to the house, complained of "itching all over," became extremely weak and nervous, "frothed at the mouth," and collapsed within fifteen minutes after the stings. Family and past history did not reveal unusual sensitivity to bee or wasp stings.

On admission, the patient was cyanotic; his lips and eyes were swollen; he was covered with perspiration, and his blood pressure could not be obtained or pulsations felt at the wrist. There was frothy material on his lips, and his tongue had been bitten on the right side. There was tachycardia of over one hundred and fifty beats per minute and heart sounds were distant. His lungs were clear. There was inequality of his pupils, and his eyes and head were rotated to the left side. His neck was moderately stiff. Breathing was rapid, shallow, and stertorous, and the general appearance was that of a cerebrovascular accident.

The patient was given one cc. of adrenalin subcutaneously immediately, followed by 50 mgm of Benadryl (R) intravenously. Oxygen by mask was started, followed by intravenous glucose in saline and blood, treatment which caused a slight improvement in that the blood pressure could be obtained at 90/60 after about three hours. He was irrational and violent and had to be restrained as well as given intravenous Sodium Amytal(R) and subcutaneous morphine and scopolamine.

About three hours after admission, the sweating suddenly stopped, and his temperature went to 107° F., axillary. Alcohol sponge baths and more intravenous fluids were given. At one time he became even more violent and hyperventilated for several minutes, at which time his blood pressure went to 170/110, but returned to the previous reading of about 90/80 after a short time. He became cyanotic if the oxygen mask was removed for more than a few minutes, though there was no obstruction to his breathing. His temperature returned to 102.6°, axillary, about six hours after admission. He had voided and passed feces. During the first seven hours he received 4,000 cc of intravenous saline and glucose and glucose in water, 500 cc. of whole blood, subcutaneous adrenalin and intravenous Benadryl (R). Seven hours after admission, his blood pressure was obtained at 110/70, and he was moved to a hospital bed.

The morning after admission, the urine report was: cloudy, acid reaction, specific gravity 1.005, albumin two-plus, sugar negative, many granular and hyaline casts, 3-5 white cells per high power field, and occasional red cells. The peripheral blood showed a hemoglobin of 14.5 Gm per 100 cc. The white cell count was 15,200 with 74% segmented forms, 24% small lymphocytes, and 2% eosinophilis. The blood Kahn was negative.

During the day after admission the temperature ranged between 100° and 103.4°, axillary. There were coarse and high-pitched rales and rhonchi over both lung fields anteriorly, and the patient was started on intravenous Aureomyecin (R), 100 mgm every four hours, and penicillin, 100,000 units every three hours. He was also given 50 mgm of Benadryl (R) intravenously every six hours and 1000 cc of 5% glucose in saline alternating with 5% glucose in distilled water every eight hours. Oxygen was continued because the patient became cyanotic within a few minutes after being removed from the tent. He continued to be irrational and violent, requiring restraints and intravenous barbiturates, which did not quiet him sufficiently, so that morphine and scopolamine were given at intervals.

On August 19, 1950, the second day after admission, the patient seemed more rational for short periods, but lapsed into excitement and was irrational and violent. The temperature ranged between 100° and 102°, axillary. Restraints could be released for only very short intervals, and oxygen was required constantly.

The third day after admission, August 20, the temperature again ranged between 100° and 102°, axillary, and the respiratory rate was between 20 and 24; the pulse rate between 94 and 110.

On August 21, four days after admission, the patient was still very restless at intervals, requiring restraints and sedation. Oxygen was continued. The axillary temperature remained between 99° and 101°. The urine on that day showed a trace of albumin, 3-5 white cells per high power field, and rare red blood cells. The white blood count was 13,200 with 26% small lymphocytes, 70% segmented forms, and 4% eosinophilis. The NPN of the blood was 23.07 mgm percent, and the icterus index was 30. The sclerae were icteric and the physical findings in the lungs remained those of rhonchi and rales. He had a harsh, non-productive cough and remained irrational and critically ill.

Early in the afternoon of the fourth day Cortisone was started at a dosage of 100 mgm every eight hours for three doses.

On August 22, the patient appeared much improved. His temperature did not go above 100°,

axillary; he was rational, and his chest was much clearer than it had been. Cough, productive of thick mucoid material, increased. The fasting blood sugar was 111 mgm percent. Cortisone was continued at a dosage of 200 mgm daily.

On August 23, the oral temperature ranged between 98.0° and 98.4°, the pulse rate was between 70 and 80, and the respiratory rate was 20. He continued to void involuntarily on occasions. Rales and rhonchi had disappeared from the anterior chest, and cough had increased. He had several loose stools during the day. Two hundred mgm of Cortisone was given on that day. It was possible to discontinue oxygen without distress to the patient, and parenteral medication could be substituted by oral Aureomyecin (R) and Benadryl (R).

On August 24, the oral temperature did not go above 98.6°. He began to eat fairly well and could sit up so that the posterior chest could be examined more accurately. Crepitant rales were heard in the posterolateral base on the right with some inspiratory wheezes. Though the patient was rational, he was still slightly hazy mentally—he could not think of names, places, etc. He also complained of numbness of the left side of his face, left leg and foot. The white blood cell count and differential revealed 7,700 cells with 74% segmented forms and 26% lymphocytes. The dosage of Cortisone was reduced to 100 mgm daily.

The patient improved steadily. Cough continued for three days and then gradually abated. He was confused mentally at times, but this gradually improved, as did the numbness of his face and leg. The chest was entirely clear on August 26, and there was no fever. On the 29th Cortisone was reduced to 75 mgm daily and to 50 mgm on the 30th. The drug was discontinued on the 31st, after nine days of treatment. On September 1, he stated that he had voided "fifteen times" during the night.

On September 2, the patient was discharged from the hospital and was seen at weekly intervals for the next three months. On September 11, he had planned to return to work, but complained of feeling "weak and nervous." The day before he had complained of "itching all over," especially the left leg and over his body. He had noted no rash, but stated that his skin "got red" when he scratched. There had been no appreciable change in his diet, and he denied eating any honey.

Physical examination revealed only a slight citeric tint of the sclerae. His white blood count was 8,300 with 52% segmented forms, 1% large lymphocytes, 39% small lymphocytes, 5% eosinophiles, and 3% monocytes. Benadryl (R) in a dosage of 50 mgm four times a day was prescribed and controlled the itching. Because of recurrence of itching, the drug was continued at intervals for six weeks.

Subsequent visits revealed gradual diminution of subjective symptoms of numbness of the left side of his face and left leg. There was objective evidence of increasing mental acuity by increased articulate speech and improved memory. Judgment and ability to make decisions improved slowly. At the time of writing, four months after the stinging episode, the patient's associates have stated that he does not have quite the ability to make definite decisions that he had before his illness. The patient has also recently stated that he does not have the energy he once had and has noted definite loss of libido.

COMMENT:

The case here reported showed symptoms and signs of reaction similar to, if not more severe, than those previously reported in patients who recovered. Braun,[26] however, had a patient who remained in coma for four days following bee stings.

The mental changes, numbness, sudden hyperpyrexia, and other signs of central nervous system injury were probably the result of petechial hemorrhages in the brain substance and perhaps the hypothalamus. Though cerebral edema associated with urticaria, such as reported by Murrell,[27] may have operated alone, it is most likely that both edema and petechial hemorrhages occurred in this case. The icterus demonstrated by this patient was probably from two causes: liver damage, as shown in Hobson's case, as well as extravascular blood destruction following petechial hemorrhages. It is also quite likely that there was pneumonitis, like that described in Dyke's case, and also renal vascular damage in this patient.

It is possible that this patient may have responded more promptly had more adrenalin been given. Determination of the part played by the intravenous antihistaminic agent given to this patient has been impossible, but its use seems to have a rational basis.

The use of barbiturates and morphine in this case undoubtedly had no beneficial effect on the patient's general condition, but it was impossible to control him by any other method.

As one of Wegelin's cases developed an extensive lobular pneumonia, it seems that the use of large doses of antibiotic agents in this patient was justified as a prophylactic, if not therapeutic, measure.

Cortisone was started in this patient on the basis that the pathological changes exhibited in anaphylaxis and serious serum disease are similar to those found in those diseases in which Cortisone has been of benefit.[28] Its use in this case seems to bear out the hypothesis that the drug is of most value in those conditions which have hypersensitivity as a common factor.

It is admitted that the patient might have recovered as quickly on the usual treatment with adrenalin, antihistaminic agents, and general supportive therapy, but the rapidity and magnitude of the change in his condition during the first thirty-six hours after the beginning of Cortisone treatment appears to deny this.

A much better point might have been made for Cortisone in this condition had the drug been given

earlier. Better, ACTH, which was not available at the time, would have been of more value because of its more rapid action. ACTH has been used by Stefanini *et al*[31] in a case of anaphylactoid purpura, and the effect was that of prompt regression of the vasculitic changes and hemorrhagic manifestations seen in that disease, which presents changes not unlike those seen in anaphylaxis from bee or wasp sting.

DESENSITIZATION:

Desensitization as prophylaxis against severe general reactions in the event of subsequent bee or wasp stings has been recommended,[29, 30] and is to be followed in this case. It is to be emphasized that an aqueous or isotonic salince extract of the entire body of the bee or wasp be given in gradually increasing dosage.

Fisher had his extract prepared by Lederle Laboratories from live bees in the following dilutions: 0.00001 mgm, 0.0001 mgm, and 0.001 mgm N per cubic centimeter. Following a skin test wheal to the 0.001 mgm dilution, Fisher gave his patient 0.1 cc of the 0.001 mgm dilution and gradually increased the dosage at weekly intervals until a dose of 1.0 cc of a 0.01 mgm dilution was reached. This dose was repeated at monthly intervals with successful desensitization.

SUMMARY:

1. A review of the literature on the subject of severe general and fatal reactions due to anaphylaxis from bee and wasp stings is presented.

2. A case of severe general reaction to wasp stings is reported with apparently life-saving results from the administration of Cortisone.

3. The use of adrenalin in adequate doses, antihistaminic agents, and general shock-combating measures is recommended as immediate first aid to be followed by Cortisone or, preferably, ACTH in cases of anaphylaxis.

4. The subsequent desensitization with extracts made from the whole body of the insect is suggested in those patients who react violently to bee or wasp stings.

REFERENCES

1. Waterhouse, A. T., Bee Stings and Anaphylaxis, Lancet 2:946, 1914.
2. Lancet 1:1585 and 1657, May and June, 1914.
3. Bevan, J. O., "Acidosis" Following Bee Stings, Lancet 2:850, Oct. 23, 1920.
4. Benson, R. L. and Semenov, H., Allergy In Its Relation To Bee Sting, J. Allergy 1:105, Jan., 1930.
5. Powell, J. A., Anaphylaxis To Wasp Venom, Brit. M. J. 2:901, Nov. 26, 1921.
6. Mackay, Hugh, Severe Toxemia Following Bee Stings, Canad. M. A. J. 14:1106, Nov., 1924.
7. von Geldern, C. E., Systemic Effects Following the Sting of Species Epyris, Science 65:302, 1927.
8. Gibb, D. F., Anaphylaxis From Pollen Introduced by a Bee Sting, Canad. M. A. J. 19:461, 1928.
9. Cawston, F. G., Acute Poisoning From Bee Sting, Recovery, J. Trop. Med. 33:391, Dec. 15, 1930.
10. Fisher, D. C., Hypersensitivity to Bees Successfully Treated With Whole Bee Extract, J. Allergy 5:519, 1934.
11. Lincoln, M., Severe Allergic Reactions Following Wasp Stings with Subsequent Relief of Chronic Arthritis, J. Allergy 7:372, May, 1936.
12. Jex-Blake, A. J., Bee Stings In Kenya Colony, Brit. M. J. 2:241, Aug. 29, 1942.
13. Dyke, S. C., Wasp Sting As An Immediate Cause of Death, Lancet 2:307, 1941.
14. Obermayer, M. E., Severe Systemic Reaction To A Bee Sting, Arch. Dermat. and Syph. 51:396, 1945.
15. Wegelin, C., Anatomic Observations in Fatal Cases of Bee and Wasp Sting, Schweiz. med. Wchnschr. 78:1233, Dec. 24, 1948 (abstr. J. A. M. A. 140: 574, June 11, 1949.)
16. Longcope and Winkenwerder, Anaphylaxis and Serum Disease, *Nelson's Loose Leaf Living Medicine*, vol. II:631, 1941, Thomas Nelson & Sons, New York.
17. Rich, A. R. and Gregory, J. E., Experimental Demonstration That Periarteritis Nodosa Is A Manifestation Of Hypersensitivity, Bull. Johns Hopkins Hosp. 72:65, Feb. 2, 1943.
18. Rich, A. R., Hypersensitivity and Periarteritis Nodosa, Bull. Johns Hopkins Hosp. 71:123, Sept., 1942.
19. Landis, E. M., Periarteritis Nodosa, *A Textbook of Medicine*, edited by Russel L. Cecil, 7th ed., W. B. Saunders Co., Phila. and London, 1947.
20. Baehr, George, Disseminated Lupus Erythematosis, *A Textbook of Medicine*, edited by Russel L. Cecil, 7th ed., W. B. Saunders Co., Phila. and London, 1947.
21. Gairdner, Douglas, Schonlein-Henoch Syndrome (Anaphylactoid Purpura), Quart. J. Med. 17:95, April, 1948.
22. Hobson, J. J., Death Caused by Wasp Stings, Memphis Med. J. 23:181, Oct., 1948.
23. Paul, J. T. and Presley, S. J., Severe Anaphylactic Reaction to Wasp Sting, Ill. Med. J. 97:283, May, 1950.
24. Helm, S., Severe Anaphylactic Reaction to Bee or Wasp Sting, Mil. Surgeon 92:64, 1943.
25. Strauss, W. T., Antihistamine Therapy of Bee Stings, J. A. M. A. 140:603, June 18, 1949.
26. Braun, L. I. B., Notes on Desensitization of a Patient Hypersensitive to Bee Stings, South African M. Rec. 23:408, 1925.
27. Murrell, Thos. W. and Murrell, Thos. W., Jr., Urticaria Associated With Cerebral Edema, Southern M. J. 43:950, Nov., 1950.
28. Serum Sickness, *Merck Manual*, 8th ed., p. 21, 1950.
29. Queries and Minor Notes, Bee Sting Prophylaxis, J. A. M. A. 138:541, Oct. 16, 1948.
30. Queries and Minor Notes, Collapse Following a Bee Sting, J. A. M. A. 141:298, Sept. 24, 1949.
31. Stefanini, M., Roy, C. A., Zannos, L., and Dameshek, W., Therapeutic Effect of Adrenocorticotropic Hormone (ACTH) In A Case of Henoch-Schonlein Vascular (Anaphylactoid) Purpura, J. A. M. A. 144:1372, Dec. 16, 1950.

Carcinoma Of The Cervical Stump

HENRY C. HEINS, M. D.*
AND
H. R. PRATT-THOMAS, M. D.*
Charleston, S. C.

Extensive analytical review of cases of carcinoma of the cervix has recently been undertaken in the Pathology Department of the Medical College of the State of South Carolina. During the past 10 years (since January 1, 1940) there have been 925 instances of carcinoma of the cervix. Included in this number were 26 patients who had experienced previous supracervical hysterectomy, an incidence of 2.9%. This figure is no doubt lower than the true incidence because in many cases very little clinical data was submitted. It does not include those cases in which amputation through an unsuspected cancerous cervix has been performed and carcinoma has unquestionably remained in the cervical remnant, but no subsequent biopsies or information is available. We have been able to find a total of 41 cases of neoplastic disease of the cervical stump recorded in our files (Table I). Various authors have found the incidence of cervical stump carcinoma to be from 2% to 8% of the total number of carcinomas seen (Table II). In reviewing the current literature it is obvious that there is still confusion and misinterpretation of statistics as regards this problem. This incidence represents the relationship of cervical stump carcinoma to carcinoma of the cervix in the intact uterus. It is not to be misinterpreted as meaning that 2% to 8% of patients having subtotal removal of the uterus subsequently developed carcinoma of the stump. This is an entirely different relationship. Pearse[1] reported 8 instances of cervical carcinoma (1%) in a group of 810 patients traced 5 or more years after supravaginal hysterectomy. Scheffy[2] found 5 cases (.9%) among 554 patients. The group of patients developing carcinoma in the stump of the cervix are usually divided into 2 groups. First, true carcinoma of the stump: those which occur in the stump 3 years or more after surgery; second, persistent carcinoma of the stump: those which occur in the stump less than 3 years after removal of the corpus. Different authors[3, 4, 5] use from 1 to 3 years as the time interval following hysterectomy in formulating standards as to which cases are true carcinomas of the stump. Three years is the most commonly accepted period. The latter group usually presents a mistaken diagnosis. It is likely that the lesion was there at the time of subtotal hysterectomy, but was not detected. This is the group that can be decreased by more adequate evaluation of the cervix if complete uterine removal is not contemplated. In the present series of 41 cases it is very probable that carcinoma was present in the cervix at the time of operation in 14 of these cases.

The diagnosis of cervical carcinoma in its asymtomatic stage may be extremely difficult even for an experienced gynecologist. Early carcinoma is characterized by histological changes which produce no gross lesion. Symptomatic carcinoma in more advanced stages can be positively diagnosed only by biopsy or cytologic studies. Granuloma venereum or severe cervicitis, particularly in a pregnant woman, may closely mimic carcinoma. Cervices of normal appearance or having mild degrees of cervicitis and erosion may harbor carcinoma.

The diagnosis of cervical carcinoma depends ultimately on pathologic study whether the carcinoma be early or well advanced. No method of palpation or visualization of the cervix will dependably enable one to decide that a patient does or does not have carcinoma.

Diagnostic methods have been perfected in recent years to stimulate interest in the diagnosis of early lesions of the cervix. Hinselman[12] devised a culposcope which permits minute visualization of the portio. This instrument, although valuable, has definite limitations which make its universal use impossible. More generally available is Schiller's[13] iodine test. This is based on the observation that normal squamous epithelial cells contain glycogen which stains dark brown with iodine. Cancer cells exhibit excessive glycolytic activity and therefore do not take the stain. Experience has shown, however, that this is by no means a specific test for cancer, as certain benign lesions also fail to stain as do areas of erosion and ectropion. Its chief value is probably in indicating to the physician which areas should be biopsied. The exfoliative cellular methods introduced by Papanicolaou and Traut[14] furnish a simple and reliable method of preliminary diagnosis and determination of which cervices should have additional examination. If the smears or spreads contain cells indicative of neoplastic activity, further investigative and confirmatory studies must be undertaken. Sponge biopsy is another modification of combined cytologic and biopsy technique which provides a simple method of pathological examination. Various types of endocervical curettes also furnish valuable aid in obtaining strips of endocervical mucosa so as to detect those carcinomas which are present within the canal.

It is generally agreed that total hysterectomy is a more difficult operation but should not be attended by a higher mortality rate than the subtotal method. It would be absurd to state dogmatically that every hysterectomy should be a complete or total one. Each

*From the Departments of Gynecology, Obstetrics and Pathology of the Medical College of the State of South Carolina.

operator has to individualize his patient, but in the vast majority of patients experiencing hysterectomy a total operation could be done. It must be kept in mind that the cervix is generally accepted as being the second most common site of carcinoma in the female. Evidence is accumulating that in areas having a large Negro population it is the most common. When it is divorced from the uterine corpus there is still an important nidus left for carcinoma. On the Gynecology service of Roper Hospital the total operation is now always done with few exceptions. These exceptions are: the very obese patient, the patient with dense inflammatory adhesions and the patient who is a very poor operative risk. On the Gynecologic Service in 1940 only 5% of hysterectomies were total, whereas in 1949 75% of hysterectomies were complete.

Our plea is not for complete hysterectomy in all cases requiring removal of the uterus. We feel that this decision rests with the individual surgeon. We do wish to vigorously emphasize that the operator should know the status of the cervix prior to any type of hysterectomy. When contemplating a hysterectomy the cervix should be thoroughly examined. The presence of fibromyomata does not eliminate carcinoma of the cervix. On the contrary, many authorities[15] believe that carcinoma of the cervix occurs more frequently in the patient with fibromyomata of the uterus. Likewise nulliparity does not mean that a patient does not have or will always remain free from carcinoma of the cervix. Mere inspection of the cervix is not enough. If the cervix has a normal appearance and the operator is not planning a complete operation, he should at least obtain cervical smears or scrapings to be sure that there is no hidden neoplastic disease. The responsibility does not end here. After the incomplete operation the patient should be followed and the cervix checked at periodic intervals.

If the cervix is eroded or lacerated, it should not be divorced from the uterine corpus by the subtotal method.[16] The patient deserves the complete operation. Many feel that subtotal hysterectomy combined with coning of the cervix from either above or below is adequate. This is not our belief. It is impossible to remove the entire portio vaginalis by this method. Hence carcinoma of the cervix is still a threat.[17] If, for some reason, the complete operation is not done in cases with a suspicious cervix, we advise preoperative biopsy or cytologic study of the cervix.

It is an accepted fact that the incidence of carcinoma of the cervix is no higher in the stump than carcinoma of the cervix in the intact uterus. The accident to be avoided is the catastrophic one of amputating the corpus through a cancerous cervix or the embarrassing one of discovering a few days or a few months after partial hysterectomy that the patient has cervical cancer. Unsuspected carcinomas of the cervix are not uncommonly found in uteri removed by complete hysterectomy. Certainly knowledge of this prior to operation would enable the surgeon to render more intelligent and beneficial service to his patient.

SUMMARY

41 cases of cancer of the cervical stump are described and analyzed. In 925 biopsies of cervical carcinoma studied during the last ten years, 26 cases occurred in the cervical stump, an incidence of 2.9%.

Complete hysterectomy should always be performed when feasible.

The cervix should be evaluated by pathologic study before any type of hysterectomy is performed.

1. Pearse, R. L.: Carcinoma of the cervical stump; (a study of the incidence in a series of patients with cervical carcinoma seen in North Carolina.) North Carolina Med. Journal 1:534-538, October 1940.
2. Scheffey, L. C.: Carcinoma of Cervical Stump J. A. M. A. 107: 837-844 (Sept. '36)
3. Cantril, S. B., and Buschke, F.: Carcinoma of the cervical stump West J. Surg. 50: 454-457, (Sept. 1942)
4. Ward, G. G.: Cancer of the cervix following supravaginal hysterectomy. Am. J. Obst. and Gynec. 41: 660-663 (April, 1941)
5. Cosbie, W. G.: Carcinoma of the cervix after supravaginal hysterectomy. Am. J. Obst. and Gynec. 51: 751-757, (June, 1946)
6. Donnelly, G. C., and Bauld, W. A. G.: Total hysterectomy and carcinoma of the cervical stump. J. Obst. and Gynec. 56: 971-975, (Dec. 1949).
7. Black, M. E.: Cervical stump carcinoma. Surg., Gynec. and Obst. 68: 898-902, (May, 1939).
8. Meigs, J. V.: Carcinoma of the retained cervix or subtotal vs. total hysterectomy. Am. J. Obst. and Gynec. 31: 358-366, (Feb. 1936).
9. Neilson, M.: Carcinoma of the Cervical Stump after Supravaginal Amputation: Acta obst. et gynec. Scandinavica 17: 295-306 (July, 1937).
10. Healy, W. P. and Arneson, N.: A study of Carcinoma of the Cervical Stump Developing after Subtotal Hysterectomy, Am. Jour. Obst. and Gynec. 29: 370-383 (March, 1935).
11. Kretchmar, N. R. and Sprague, G. S.: A consideration of the Surgical Menopause after Hysterectomy and the Occurrence of Cancer in the Stump Following Subtotal Hysterectomy, Am. Jour. Obst. and Gynec. 29: 168-175 (Feb. 1935).
12. Martzloff, K. H.: "Cancer of the Cervix uteri: registers early manifestations"—J. A. M. A. 111: 1921 (Nov. 19, 1938).
13. Schiller, Walter: The Diagnosis of Carcinoma of the Cervix a Very Early Stage—Laucet: 1, 1228 (1936).
14. Papanicolaou, G. N. and Traut, H. F.: Diagnosis of Uterine Cancer by Vaginal Smear, New York Commonwealth Fund (1943).
15. Phaneuf, L. E.: Indications for hysterectomy. (Ed.) Surg., Gynec. and Obst. 89: 92-93, (July, 1949).
16. Crawford, J. B.; Collins, C. G.; Weed, J. C.: The cervical stump; (an analysis of 123 cases). Surg., Gynec. and Obst. 88: 465-472, (April, 1949).
17. Martzloff, K. H.: Routine abdominal panhysterectomy as praphylaxis against cancer of the cervical stump. Surg., Gynec. & Obst. 75: 628-633, (Nov. 1942).

Case and Series No.	Age	Race	Time Post Operative	Symptoms and Duration	Type of Carcinoma
1. 11022-B	31	White	3 yrs.	Vaginal bleeding recently	Epidermoid
2. 13175-B	63	White	12 yrs.	Recent severe hemorrhage	Adenocarcinoma of cervix.
3. 15713-B	?	White	15 yrs.	Considerable hemorrhage	Epidermoid
4. 15963-B	?	White	5 mos.	Growth on cervix. Cervix normal at time of subtotal hysterectomy	Epidermoid
5. 36101	45	?	Stat	Specimen taken after supra-vaginal hysterectomy "External Cervix looks normal.	Epidermoid
6. 77639	44	White	16 yrs.	Vaginal bleeding for 1 month.	Epidermoid
7. 83672	46	White	8 yrs.	Intermittent bleeding for 6 mos.	Epidermoid
8. 95273	43	Negro	3 yrs.	Vaginal bleeding for 14 mos. Cervix said to be normal at time of supra-vaginal hysterectomy.	Epidermoid
9. 102756	38	White	4 yrs.	Vaginal bleeding for few weeks.	Epidermoid
10. 114211	55	White	15 yrs.	Vaginal bleeding 6 weeks.	Epidermoid
11. 119092	47	White	12 yrs.	Vaginal bleeding 3-4 months.	Epidermoid
12. 124604	39	White	?	Erosion of cervix.	Epidermoid
13. 128545	45	Negro	2½ mos.	Bleeding since hysterectomy.	Epidermoid
14. 130234	56	White	11 yrs.	Blood tinged discharge 1½ years.	Epidermoid
15. 132358	48	White	14 yrs.	Metrorrhagia for 8 months.	Epidermoid
16. 138900	62	White	2½ yrs.	Abnormal bleeding.	Epidermoid
17. 140795	43	Negro	1½ yrs.	Vaginal bleeding 4 months.	Epidermoid
18. 140914	?	White	1 mo.	Bleeding since operation.	Epidermoid
19. 141184	73	White	18 yrs.	Vaginal bleeding for 10 days.	Intra-epithelial carcinoma
20. 149851	36	Negro	5 yrs.	Vaginal bleeding 6 months.	Epidermoid
21. 161633	37	Negro	4 yrs.	Bleeding following intercourse.	Epidermoid
22. 165672	43	Negro	4 days	Vaginal bleeding, 2 years.	Epidermoid
23. 177760	44	White	"several years"	Severe bleeding for 1 week.	Epidermoid
24. 180250	38	Negro	8 yrs.	Cervix of suspicious appearance.	Epidermoid
25. 184197	42	White	10 yrs.	Vaginal bleeding several months.	Epidermoid
26. 185472	42	White	9 yrs.	Irregular vaginal spotting for 2 years.	Epidermoid
27. 196051	47	Negro	18 yrs.	Vaginal bleeding for 2 years.	Epidermoid
28. 197681	29	White	1 yr.	Vaginal bleeding.	Endometrial sarcoma
29. 198627	41	White	2 yrs.	Spotting for 1 year.	Epidermoid
30. 199619	54	White	2 yrs.	Spotting for 2 years, bleeding at time of supracervical hysterectomy.	Epidermoid

Case and Series No.	Age	Race	Time Post Operative	Symptoms and Duration	Type of Carcinoma
31. 200036	?	?	10 yrs.	Vaginal bleeding for 3 months.	Epidermoid
32. 201696	54	White	6 yrs.	Vaginal bleeding for 6 weeks.	Epidermoid
33. 201853	61	White	22 yrs.	Polypoid cervical growth.	Epidermoid
34. 202205	65	White	25 yrs.	Vaginal bleeding for 1 year.	Epidermoid
35. 202447	45	Negro	12 yrs.	Postcoital spotting for 3 months.	Epidermoid
36. 204173	52	White	?	Bloody vaginal discharge	Intra epithelial carcinoma
37. 207627	50	White	20 yrs.	Suspicious area on cervix found on routine exam.	Adenocarcinoma of cervix
38. 212752	57	Negro	22 yrs.	Yellowish vaginal discharge for 3 months which became bloodtinged.	Epidermoid
39. 215250	26	Negro	2 yrs.	Lower abdominal pain. Fixed stump with parametrial induration.	Epidermoid
40. 216490	52	White	3 yrs.	Vaginal bleeding.	Adenocarcinoma of cervix.
41. 219540	50	White	3 yrs.		Adenocarcinoma of cervix.

TABLE I

ANALYSIS OF 41 CASES OF NEOPLASTIC DISEASE OF THE CERVICAL STUMP

Author	Year	No. of Cases of Carcinoma of Cervix	Carcinoma of Stump	Percent
Donnelly and Bauld[6]	1926-1948	780	40	5.12
Pearse[1]	1940	620	35	5.6
Black[7]	1939	234	19	8.1
Meigs[8]	1936	1218	26	2.5
Ward and Sackett[4]	1938	752	56	7.4
Nielson[9]	1937	420	9	2.0
Scheffey[2]	1936	273	10	3.66
Healy and Arneson[10]	1935	2600	67	2.6
Kretschner and Sprague[11]	1935	1022	18	1.76
Heins and Pratt-Thomas	1950	925	26	2.9

TABLE II

INCIDENCE OF CERVICAL STUMP CARCINOMA

Office Gynecology

DAVID F. WATSON, M. D.
Greenville, S. C.

The subject "Office Gynecology" is far too extensive to be adequately covered in a paper which is, by necessity, as brief as this. It is our desire to present certain aspects of this subject as it relates to the General Practitioner in hopes that more interest may be created in a branch of medicine which constitutes a large portion of the family physician's daily work.

Since more than half of the population is female, and since more females take time to seek medical care, far more than half of the adult patients seen by the average practitioner are women. At least fifty percent of these women have complaints referable to the field of Gynecology. It would therefore seem necessary for the physician to have spent a proportionate amount of his time in training in this field of medicine. Yet in the average medical school only 7.3 percent of the total hours of instruction are devoted to Gynecology,[1] and a great part of these hours are limited to the surgical aspect of the field. Likewise in the average rotating internship, medical or office Gynecology constitutes an extremely small portion (if any at all) of the time spent on a gynecological service. Because of this lack of basic training it is necessary for the physician to obtain his information and formulate his diagnosis and therapy from reference books, staff conferences, medical meetings, and more frequently from the ever handy "detailman."

With time and the proper equipment (which is a small item), the average competent practitioner could take care of at least 75 to 80 percent of the problems that arise in office gynecology. Yet he is caring for a much smaller proportion of patients than this. Why? There are several factors that are responsible for the number of patients being seen by Gynecologists that ordinarily could be taken care of by the General Practitioner. Some of these factors are as follows:

1. Lack of Training in Office Gynecology.

As we have previously mentioned there is a definite lack of instruction in office gynecology in medical schools, internships, and average rotating residency or post graduate course. This lack of knowledge on the part of the conscientious general practitioner leads to more referrals to the specialist.

2. Inadequate Equipment for Proper Diagnosis and Therapy.

The practitioner may feel that he cannot afford the instruments necessary to perform adequate gynecologic diagnosis and treatment. This is a mistaken idea because so little special equipment is needed. There is probably no place in medicine where the organs involved are so accessible to inspection and palpation.

3. Referrals during War Years.

Everyone knows that there was not a more overworked person during the war than the active general practitioner. There were never enough hours in a day to allow him to take care of all that was expected of him. During these years (and even yet in some very busy offices) it was a delight to find a patient with some complaint that might justify a referral to a specialist in order to lighten the load of office work. This practice has persisted to a certain extent, either because the physician is still too busy to properly evaluate and treat these patients, or he may feel that he has "lost the touch" as far as office gynecology is concerned.

Likewise the doctor who served in the Armed Forces was usually far removed from the field of gynecology, and may also now feel incompetent to handle these patients.

4. False Ideas regarding Pelvic Examinations.

The idea in some physicians minds that they will cause too much embarrassment to their friends who are patients, by performing a pelvic, leads to omission of the essential part of any complete examination. Following the failure of their family doctor to completely examine them, a number of these patients will seek consulation with the specialist. This is an abnormal situation. There may have been such a feeling among women at one time, but it has practically vanished. Most women at the present time realize the value of a complete examination, and expect the same when they go to their physician. They respect his thoroughness and judgement when he makes a complete examination. Every week we see one or two patients who come in for a pelvic examination saying that they went to the family physician several times but that he did not examine them "internally."

5. By-passing the General Practitioner.

This is one of the most difficult problems from the standpoint of the specialist, and also one of the most important from the standpoint of the family physician. Due to the importance placed on the specialist's rating during the recent world conflict, and the persistance of these ideas as practiced by the Veteran's Administration, and due in part to points 1 through 4 above. there has arisen the feeling in some that only the specialist is competent to treat patients. The fallacy in this thought is obvious. The solution to the problem, however, has not been found.

Is it better for the gynecologist to make a diagnosis in the case and then refer it back to the family physician for treatment, or to continue with the treatment himself? In either instance it would seem to give the

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patient the impression that the general practitioner was not competent to handle the case. The answer apparently would be an effort on the part of the family physician to better equip himself and his office to take care of these minor problems intelligently and adequately, in fairness to the patient and himself. Such is the purpose of the Academy of General Practice which has come into being in recent years.

By the foregone discussion we do not mean to imply that there is no need for the specialist. The family physician should not hesitate to refer a patient to a gynecologist should he feel that his own management might, in any way, jeopardize her. Every physician, general practitioner or specialist, should realize his own limitations and never temporize with a patitnt while trying to "save face" for himself.

HISTORY.

The first essential in the management of any medical problem is proper diagnosis. The first step in arriving at any diagnosis is the taking of an adequate history. An adequate gynecologic history cannot be taken by a nurse or secretary, no matter how competent she may be. The personal nature of problems related to the genital organs makes it essential that they be discussed by the physician himself preferably in the privacy of his consultation room. The psychosomatic element in gynecologic problems can only be revealed by careful history taking. It is usually better not to record certain facts in the presence of the patient, but to wait until she is being readied for examination to make notes on her chart concerning these facts.

PHYSICAL EXAMINATION.

The necessity for performing a complete physical examination on any gynecologic patient is obvious. The greatest part of the examination need not be in detail, but sufficient to acquaint the examiner with possible disorders in other body systems. It should be realized that 85 percent of cancer in women is located in the breasts, generative organs, or lower rectum, all sites which are within reach of the examining fingers. Theoretically adequate examination of these three areas routinely from birth would enable one to prevent cancer or diagnose its existance early enough to obtain a cure, thus preventing 85 percent of cancer deaths in women.

It is important to realize that a large number of patients with complaints referrable to the generative organs may actually be suffering from disorders of closely related organs. Guerrero[2] reported recently that 42 percent of 1,197 consecutive patients with gynecic symptom complexes complaints were found to be due to entities other than disease of the genitalia.

A gentle but thorough examination of the pelvic structures is the last part of the physical examination. If the patient is having a regular menstrual period it is best not to perform the pelvic examination. However, if there is a bloody discharge not associated with a normal period, a pelvic examination is definitely indicated.

LABORATORY EXAMINATION.

Routine laboratory work on any gynecologic patient should include a urinalysis (preferably obtained by catheter), partial blood work (particularly a corrected sedimentation rate, hemoglobin determination and an Rh factor), and vaginal smears and hanging drop preparations (particularly in the presence of any abnormal secretion). The use of vaginal and cervical cytology (method of Papanicolaou) as a screening agent for malignancy cannot now be included as routine in every office, yet it may be so in the near future. However, every physician can take smears for cytological examination, or biopsies, or both, on any case in whom there is a suspicion of malignancy.

Other special laboratory procedures will be mentioned later under specific conditions necessitating them.

COMMON COMPLAINTS

The complaints presented by female patients has changed but little over the past 50 years. We shall briefly discuss the most common of these complaints and the usually satisfactory management. Again we would mention the importance of remembering that complaints which seem referable to the generative tract may be due to disorders of closely related lower abdominal or pelvic structures. The importance of careful history taking and adequate examination cannot be over emphasized.

1. Menstrual Disturbances.

The disturbances of menstruation constitute a group of the most common complaints received by the family physician or gynecologist. These disorders include amenorrhea as well as hypermenorrhea (menorrhagia) and polymenorrhea (metrorrhagia).

a. Amenorrhea. It is indeed embarassing at times to fail to first consider pregnancy when amenorrhea is complained of, regardless of the marital status, age, or history of the patient. Amenorrhea as one symptom of the menopause will be discussed later in the paper.

Primary amenorrhea may be due to congenital abnormalities of the generative organs, or organs of internal secretion for which there may or may not be any therapy depending on the structural derangment. Secondary amenorrhea may be psychic in origin or may be due to a debilitating systemic disease. It may also be due to disturbance of hormonal balance from many causes. If general measures such as vitamins and iron therapy, correct diet, reasurrance and time do not bring about cyclic bleeding then further evaluation of the case is necessary. The patient should be carefully examined to rule out a masculinizing neoplasm of the pituitary, adrenals or ovaries. The use of hormonal stimulation in these patients, we feel, should be on the advice of a gynecologist or endocrinologist. Stimulating irridiation of the pituitary,

ovaries, and adrenal glands, in selected cases, should be administered only by a competent radiologist.

b. Hypermenorrhea and Polymenorrhea are more frequently seen than is functional amenorrhea. Any patient complaining of excessive or frequent vaginal bleeding, regardless of the age of the patient or the amount of the flow, should be carefully examined to rule out malignancy prior to institution of therapy. Vaginal and cervical cytology and/or cervical biopsy should be used without hesitation in any such patient. A diagnostic curettage is justified if there is any question after the above steps have been performed.

Unhealed lacerations of the cervix, cervical polypi, extensive erosions or eversions, ruptured cervical varices, or subinvolution of the uterus usually respond to office treatment. Organic pelvic pathology such as uterine myomata, malignancies, etc. necessitate surgical or radiological therapy. Blood dyscrasia and systemic diseases should next be ruled out. When one has arrived at a diagnosis of functional uterine bleeding, reassurance, diet, vitamin and iron therapy, and time may be all that is necessary. Empirical thyroid therapy is one of the most effective simple measures in treatment, but it must not be continued for prolonged periods without adequate follow-up.

In the persistent cases, having ruled out malignancy, one may use any number of methods to control the bleeding. Our preference is heavy doses of estrogens by mouth, until the bleeding has stopped, then gradual withdrawal of the drug, discontinuing it about eight days before a flow is wanted. This type of cyclic therapy may be needed for three or four months in order to reestablish a normal cycle. Estrogen and progesterone in combination have proved no more effective for us than estrogen alone. Androgens may be used but their effect is only temporary, if at all.

If no improvement is noted after a reasonable trial of carefully managed hormonal therapy, the problem should be referred to a specialist for curettage, metabolic studies and hormonal assays.

Again we would emphasize the importance of ruling out malignancy before beginning any form of therapy in a patient with irregular bleeding. Never postpone a pelvic examination because a patient is bleeding, if the bleeding is not that of a normal menstrual period.

2. Abnormal Vaginal Discharge.

Abnormal discharge from the vaginal tract is a common complaint, and may result from a multiplicity of causes. Its origin may be from the urethra, Skene's glands, Bartholin's glands, the vagina, cervix, uterus, tubes, or from the bladder or rectum through fistulous tracts. The source should be determined and secretions studied by stained smear, hanging drop, culture or Darkfield where indicated.

The most frequent cause of discharge is an eversion of the endocervical mucosa with erosion, hypertrophy and possibly Nabothian cysts, causing excessive secretion and lowgrade infection. In the absence of acute pelvic infections, and after ruling out cancer and pregnancy, most cervical lesions may be satisfactorily treated in the office. Cauterization, electro-congulation, or conization may be necessary. Self administered sulfa cream and acid douches for varying periods of time after such procedures result in better healing of the cervix.

Disturbed vaginal physiology often results in an infestation of trichomonads or yeast fungus, both of which cause an irritating vaginal discharge. Vaginal trichomoniasis is accompanied by a profuse foamy yellow-green discharge while the discharge of the yeast vaginitis is white and watery. The vaginal membranes are spotted with petechiae as a result of a trichomonas infestation, while in the yeast vaginitis the walls are coated with patches of white curdy material covering an inflammed area. In any case of yeast vaginitis, blood and urine examinations for diabetes should be carried out. In either of the above types of vaginitis we prefer office therapy until symptoms have abated, then selfmedication for varying periods.

Vaginal trichomoniasis is extremely resistant to a permanent cure, but usually fairly easily controlled symptomatically. The vagina should be thoroughly cleaned with soap and water, irrigated with an aqueous antiseptic and dried. Vaginal insufflation with medicated powder (silver picrate or Floraquin) is then carried out. This is repeated daily or every two days until the infestation seems controlled, following which the patient is given instructions as to the use of Floraquin suppositories and acid douches at home. Therapy should be continued throughout the next menstrual cycle and for 5 days following it, then throughout and for 5 days following the next three menstrual periods. The patients are told of the possibility of reinfection from the rectum and advised regarding cleansing habits after defecation. With continual recurrence the husband must be checked as a source of reinfection.

Yeast vaginitis therapy begins in the same manner of vaginal cleansing and drying. We have found nothing better for initial treatment than 2% aqueous gentian violet solution painted on and thoroughly dried. This procedure is repeated every two or three days with no treatment between times. After abatement of the symptoms the patients are prescribed either Albanox Gel (Ortho) or Propion Gel (Wyeth) to be used at home in conjunction with cleansing douches in an effort to restore normal vaginal flora and the normal pH. Patients with yeast vaginitis are told of the possibility of reinfection from their clothing and from their husbands (particularly from smegma of the uncircumcised mate), and are advised how to prevent same.

3. Dyspareunia and Frigidity.

Painful intercourse and lack of sexual desire are mentioned together because they are frequently associated symptoms. Dyspareunia on intromission of the penis in the absence of vulvar or vaginal abnormalities is usually associated with vaginismus and a de-

gree of frigidity. There is commonly a definite psychic element involved. Thoughtful understanding and careful reassurance along with vaginal dilitation, warm douches, instructions to both parties regarding intercourse, and attempts at stimulation of libido in the patient is usually adequate therapy. Frigidity in the absence of dyspareunia or pelvic abnormalities usually responds to the above treatment. The use of androgens for stimulation of the sexual appetite has proved very satisfactory.

Dyspareunia on deep penetration often indicates retroflexion and retroversion of the uterus with prolapse of the ovaries, chronic cervicitis with pelvic lymphadenitis, acute or chronic infections of the tubes, or pelvic neoplasms. Therapy will depend on the particular disorder present.

4. Backache.

The word "backache" is used to imply a multitude of pains. The etiology of the pain that causes the patient to seek medical advice may be orthopedic, urologic, neurologic, medical, psychic or gynecologic in nature. It is very necessary to remember this in evaluating any patient with such a complaint. Gynecologic causes of backache includes pelvic and vaginal relaxations, uterine malpositions, chronic cervicitis, varicosities of the broad ligaments, inflammation of the uterus, ovaries or pelvic peritoneum, and pelvic tumors.

The factor considered singly most important by most physicians and surgeons is a retroflexed and/or retroverted uterus. Too many of these patients are unnecessarily operated on before it is determined whether or not the retrodisplacement has anything to do with the patient's symptoms. Before performing a suspension for an uncomplicated retrodisplacement one should always prove that the operation is necessary by a "pessary test." By this we mean a therapeutic trial with a properly fitted vaginal pessary after manual replacement of the uterus. More often than not it is prolapse of the uterus accompanied by retrodisplacement which is causing the backache, and prolapse is not cured by suspension operations.

The management of other types of gynecologic backache would be too time consuming to attempt discussion of them in this paper.

5. Infertility.

The inability to conceive is causing a large number of patients to seek medical advice. The most frequently consulted physician is the family doctor. He should be able to carry out all but a few of the procedures leading to an analysis of the cause of the patient's infertility. Although each couple's problem must be individualized it is helpful to have a general routine plan of attack. A good policy is to perform the simple tests first, then give advice and reassurance and wait for one or two months before proceeding further. Our plan is somewhat as follows:

A complete history, physical examination and laboratory workup on the female, followed by a semen analysis (or complete workup if such is possible) on the male. If no definite abnormality of either partner is found, general corrective measures are instituted (diet, rest, exercise, abstinence from alcohol and smoking, empiric thyroid, and iron and vitamins if needed), the patient is informed when to have intercourse, and is instructed to record the morning temperature for 2 or 3 months. The resultant temperature curve will give an indication whether or not the patient ovulates.

If there has been no success with the above, the patient is instructed to return within 24 hours after the onset of the next menstrual period for an endometrial biopsy. This simple office procedure will, by allowing histologic examination of the endometrium, determine whether or not ovulation has preceeded that period of flow.

About 2 weeks after this we usually perform a Huhner post-coital test, to determine whether or not the sperm are freely passing through the cervical mucous. If there is evidence of incompatible cervical mucous, a careful endocervical cauterization is justified.

Since most general practitioners are not equipped to perform tubal visualizations it may be necessary to refer the patient to a gynecologist if success has not been obtained up to this point. However, do not be surprised if your specialist colleague is able to do no better than you have done.

6. Dysmenorrhea.

Painful menstruation may be either primary or secondary. Primary dysmenorrhea is present without demonstrable pelvic lesion. There are many possible causes, the most usual of which are of constitutional, endocrine or psychic origin. Treatment is legion and we have nothing new to offer. Relief may be obtained by reassurance, along with attempts at correction of nutritional, psychic and mental factors involved. Antispasmodics combined with barbiturates and with or without codeine will help the majority. Office dilitations and possibly the use of a stem pessary will benefit some cases. Fluid and salt restriction with ammonium chloride administration for 5 to 7 days prior to the onset of flow will relieve the vast majority of cases with premenstrual tension.

Dysmenorrhea secondary to pelvic pathology responds permanently only with treatment of the underlying cause. The use of androgens in cases of endometriosis gives excellent results, provided the condition is not to widespread.

7. The Menopause.

The climacteric with its associated cessation of ovarian function and resultant vaso-motor disturbances causes a varied response in any given group of women. Those who have been emotionally stable throughout life rarely are adversely affected by these symptoms. However, the high-strung, nervous woman with a tendency to emotional instability will usually complain excessively when such occurs.

Successful treatment depends as much on the physician's understanding of the individual patient, and the patient's confidence in her physician, as on anything else. With complete reassurance of the patient, correction of any nutritional deficiencies, and symptomatic therapy, most patients respond well. The use of estrogens should be completely abolished in the physiologic menopause, or limited to small doses orally and for only a short period of time in the occasional case with severe symptoms. Much more harm than good may come from prolonged administration of estrogenic substances. We prefer mild sedation with barbiturates and/or stimulation with Dexidrine (R) or Dexamyl (R) as the case indicates, rather than administration of hormones.

8. Periodic Examinations.

A relatively large percentage of our patients come in for routine checkups. These visits are prompted by a desire to prevent the development of a serious condition such as cancer, and are largely a result of lay education as to the value of periodic examinations. There is no reason why the family physician should not be performing these examinations and encouraging more patients to have them done. Again we would stress the importance of examination of the breasts, genital organs and rectum in any female patient visiting her physician. It is our hope that vaginal and cervical cytology will soon be a part of every examination of this nature in the family physician's office, as it is in our own.

9. Urologic Symptoms.

Gynecologic complaints frequently are associated with urologic symptoms such as urgency, frequency and dysuria. Disorders of the female genitals may produce disturbances in the urinary tract and visa versa. It is essential to investigate both systems when symptoms relating to either are given.

10. Premarital Examinations.

In spite of the fact that our state does not require premarital examinations, a large number of prospective brides and grooms are requesting such conferences as a result of lay education. These examinations should be handled adequately by the family physician. The bride-to-be should have a complete physical examination, along with pre- and post-examination conferences. The groom-to-be should have a blood test for syphilis and should also be invited for a conference. Even though the prospective groom has had sexual experiences for a long time, he must be made aware of the importance of the first few days of marriage and the effect that these days may have on his wife for all time. Both young people should be instructed in contraceptive methods as well as about sexual intercourse. The physician must constantly attempt to allay fear concerning marriage in general, the act of intercourse, and childbearing. If any physical defect is found that might prevent normal sexual activity, this should be remedied far enough in advance of the wedding, in order that healing has taken place prior to that date. Adequate and intelligent premarital conferences can prevent many instances that might lead to unhappy marriages.

SUMMARY AND CONCLUSIONS.

1. Office gynecology constitutes an important portion of the average practitioners daily work.

2. 75 to 80% of office gynecology should be adequately taken care of by the family physician.

3. Many factors are responsible for the high percentage of these patients who are being seen by the specialist.

4. A careful history and physical examination and basic laboratory work should preceed any gynecologic therapy.

5. Adequate examination of the breasts, genitals and rectum will cover the site of 85% of the cancer in women.

6. Vaginal and cervical cytology is a valuable screening agent for cancer of the cervix or fundus uteri.

7. Certain common office gynecology complaints are listed and briefly discussed.

BIBLIOGRAPHY:

(1) Stander, H. J.: Undergraduate and Graduate Instruction in Obstetrics and Gynecology:
Am. J. Obst. & Gynec. 51:771-779 June 1946.

(2) Guerriero, Wm. F.: Gynecic Symptom Complexes.
New Orleans M. & S. J. 101: 502-507 April 1949.

Submaxillary Duct Calculi

A. M. STANTON, M. D.*, FURMAN T. WALLACE, M. D.
AND WILLIAM F. UTTERMAN, M. D.*
Spartanburg, South Carolina

Submaxillary duct calculi produced a characteristic clinical syndrome by which the diagnosis may be established. All are amendable to surgical therapy.

More than 86 percent of all salivary calculi occur in the submaxillary gland and duct. The calculi are found much more frequently in the ducts than in the gland. Submaxillary calculi are not common, nor are they rare. They may occur at any age, though they usually appear in middle age individuals. They are seen more frequently in male patients. The stones are usually single but may be multiple. They vary in size from very small particles to one or two inches in diameter. Weights vary; the largest reported was 67 grams.

On the average the composition of the calculi are variously estimated to contain calcium phosphate, 65 percent; organic matter, 25 percent; calcium carbonate, 6 percent; with traces of iron and magnesium. Sometimes foreign bodies such as pieces of wood, grass particles, etc., are reported present.

The etiology of these calculi is still uncertain. The causes have been variously ascribed to oral sepsis, dental caries, systemic infections and endocrinopathy. They may form about foreign bodies and may have as their nucleus bacteria or waste products from about the mouth. They may be formed by a change in the reaction of the salivary secretion, causing a precipitation of salts.

The anatomic relations of the salivary gland and duct may predispose to the greater number of submaxillary calculi (Figure 1). The submaxillary gland is situated at a lower level than the duct itself. This tends to retard the flow of saliva from the gland to its point of exit below the tongue. The duct is longer than the other salivary ducts and with its upward slope stones cannot be expelled as easily as in the other glands. Finally the opening of the submaxillary duct being located behind the incisor teeth becomes exposed to the trauma incidental to mastication. Foreign bodies can more easily be forced into the duct at this site.

The symptoms are usually those due to obstruction and associate infection in the duct or gland. The duct becomes blocked by a stone causing a back pressure of the saliva in the duct gland. The gland enlarges and becomes tense and quite painful after eating. It is palpable just below the mandible. (Figure 1). This mass is usually tender. Pain is produced to the extent that the patient usually stops eating solid food.

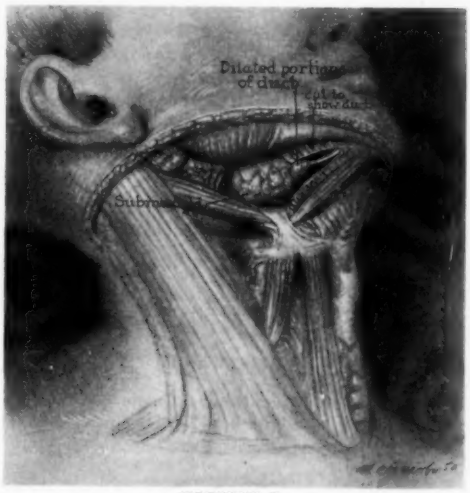

FIGURE I

Anatomical relationships of submaxillary gland and duct. The duct is obstructed by a calculus.

FIGURE II

X-ray showing calculus in middle third of submaxillary duct.

X-rays, when properly taken, nearly always demonstrate the calculus. (Fig. II). X-rays are made with large intra-oral dental film facing down with the film parallel to the floor of the mouth. The tube is placed beneath the mandible pointing perpindicular to the film.[1]

Differential diagnosis should be made from tumors of the jaw or lymph glands, salivary gland infection,

From the Department of Surgery, Spartanburg General Hospital.
*Fellow in Surgery, Wallace Foundation.

tumors, cysts, enlarged lymph nodes, tuberculosis, lues, and actinomycosis.

The treatment of submaxillary calculi is usually considered to be surgical. Many small stones will pass spontaneously due to the hydrostatic pressure of the saliva behind them. Bougies may be introduced into the duct, dilating it and allowing the calculus to pass. Many calculi are too large to pass and will require surgery. The initial approach should always be inside the mouth. Nerve block with 2 percent procaine supplemented with 10 percent cocaine may be used. For more extensive explorations, intratracheal anesthesia may be required.

The incision is over the calculus and parallel to the duct. The mucosa is not usually sutured or only loosely approximated. If attempts to remove the stone from the duct using an oral approach are unsuccessful, the entire submaxillary gland and proximal duct should be removed through an external incision parallel to and just below the lower border of the mandible. Intratracheal anesthesia is preferable.

CASE REPORTS

1. L.S., a 30-year-old white female was seen as an out-patient on 8/2/48. There was a history of swelling in the left side of the neck, particularly after eating.

Examination revealed edema around the opening of the left submaxillary duct and of the floor of the mouth on the left. An area of induration was palpable 3-4 mm. from the opening of the duct. The left submaxillary gland was slightly enlarged and tender. X-ray examination on 8/2/48 revealed a density in the region of the left submaxillary duct. On 8/4/48 the duct was canulated and opened. A small calculus was removed. The incision was left open. The patient had an uneventful convalescence.

2. B.H.S., a 44-year-old male was admitted to the hospital on 7/6/50 with a complaint of swelling in the left side of his neck. The swelling was noted two days before admission and following the eating of a piece of candy. Since then, he noticed a painful swelling in the left submaxillary region after meals. About a half-hour after the meal, the pain and swelling would subside.

On examination, the patient was normal except for the mouth and neck. The left submaxillary duct was swollen and reddened. There were no secretions from the left duct. No stones were palpable in the duct. On examinations of the neck, the left submaxillary gland was enlarged and tender to palpation.

On 7/7/50 an X-ray of the floor of the mouth revealed a small round density (Figure 2). This was presumably a stone in the left submaxillary duct.

On 7/10/50 using 1 percent local procaine, the left submaxillary duct was dissected out from within the mouth. A stone about one-half cm. in diameter was found in the mid-third of the duct. The duct was opened and the stone extracted. The duct was left unsutured. Recovery from pain and swelling in the left submaxillary gland was immediate, and the patient was discharged on 7/15/50 with no complaint.

3. R.J.B., a 35-year-old dairy farmer was first seen on 8/6/48, one week prior to admission to the Spartanburg General Hospital with the chief complaint of pain, swelling, and tenderness in the left submaxillary region. Pain was accentuated in the submaxillary gland by eating.

Examination revealed a well-developed and nourished white male in acute distress. There was considerable tenderness over the left submaxillary region. No calculi was palpable. The remainder of the physical examination was normal.

On 8/13/48, using local 1 percent novacaine, exploration of the submaxillary duct was done both by probing and by incising and opening the duct. No calculi was found to be present in the duct. The patient was discharged on the day of operation.

On 8/21/48 he was re-admitted to the hospital for removal of the stone or excision of the submaxillary gland. This was first attempted on 8/23/48 under general anesthesia. Because of difficulty with anesthesia due to an old ankylosis of the jaw, surgery was postponed. On 8/26/48 under local anesthesia, the left submaxillary gland, with the stone imbedded in it, was excised. The stone was present in the gland near the duct. The patient did well post-operatively and was discharged markedly improved on the fourth postoperative day. This demonstrates a case when the calculus imbedded in the gland caused obstruction of the saliva and required removal of the gland.

SUMMARY

The diagnosis and treatment of submaxillary duct calculi has been discussed. Three representative cases are presented.

BIBLIOGRAPHY

1. H. E. Plenge, Chief of Radiology, Spartanburg General Hospital, personal communication.
2. A. C. Furstenburg, M. D., "Diseases of the Salivary Glands," *Journal of the American Medical Association*, Vol. 136, #1, January 3, 1948.
3. T. J. Ritchie, "Submaxillary Calculus, Spontaneous Cure," *Medical Journal of Australia*, September 13, 1947.
4. D. H. Vance, Medical Corps, U. S. Navy and C. P. Whitelaw, Medical Corps, U. S. Navy, "Diffuse Deep Submaxillary Cellulitis Treated with Penicillin," *Naval Medical Bulletin*, September, 1945.
5. F. P. Quinn, "Diagnosis and Treatment of Salivary Calculi," *Journal of Iowa State Medical Society*, Vol. XXXVII, #10, October, 1947.
6. R. H. Patterson, "Salivary Gland and Duct Calculi," *Surgical Clinics of North America*, April, 1932.

CANCER

Edited by HENRY W. MAYO, JR., M.D., Charleston, S. C.

CANCER: A RELEASE OF GROWTH POTENTIAL

BY

JOHN T. CUTTINO, M. D.
Charleston, S. C.

The explanation of the cause of cancer is a problem of growth. Definitions of malignant tumors are as numerous as there are authors who write on the subject. However, all such definitions include the concept and even the word growth. Yet, amazingly enough, the study of the normal growth of tissue has only recently been utilized as an avenue of investigation in the attempt to seek out an understanding of the malignant process.

It has been frequently stated, in one form or another, that the fundamental process in the development of cancer is a combination of stimulants to growth and genetic potentials which by interaction induce malignant growth. It would seem clear that, in order to ever understand these principles which induce abnormality of growth, one must first understand the forces which work together to produce normal growth.

The phenomenon of growth might be considered as consisting of two concurrently operating phases. One is the simple increase in mass; and the other is the development of tissues indicated by the change in the number, character and relationship of the cells. These changes in cell morphology are accompanied by a differentiation of function. While they differ in fundamental nature, activation, and control, these two processes cannot exist independently of each other. Simple increase in mass cannot produce a functioning integrated individual nor can cells divide and differentiate without increasing their volume of protoplasm.

The initiating mechanism which causes the ovum to begin its cleavage and synthesis is not clearly understood but it is recognized that the phenomenon of fertilization is the stimulating event. We do know, however, some of the factors which exert control over the early stages of growth. (1) Everyone who has stored eggs in refrigerators can certify that low temperature retards development. (2) Every specie of animal has its own rate of growth in that the developmental period varies with various species. (3) There is a wealth of experimental data to support the importance of an adequate supply of the various elements of nutrition. (4) In addition to these extrinsic physico-chemical influences, there are a group of poorly understood growth promoting hormonal factors of which three different ones have been experimentally emphasized. First, it has been repeatedly shown that embryonic tissue grows in tissue culture at a much more rapid rate if placental extracts are supplied. Second, removal of the thyroid of embryos will produce dwarfs at the time of maturation. Third, hypophysectomy in young animals results in the limitation of growth while addition of this growth-principle produces giantism.

Simple increase in mass is by no means the only process involved in the early growth of the embryo. If it were, the ovum would never abandon its spherical morphology. It is quite obvious, then, that growth proceeds in different portions of the organism at distinctly different rates. This accounts for the timing of the development of the various portions of the embryo and is referred to as individuation.

The nature of the control mechanisms of this differentiation and individuation is exceedingly complex. The explanations are not clear and can only be enunciated in the most general terms. Detailed consideration of these principles is outside the scope of the present discussion; however, most investigators utilize the concept that these changes in morphology occur as a result of a complex system of evocators and organizers. The complexity of this concept is indicated by the necessity to invoke a hierarchy of organizers of various degrees of potency. For example, the stimulus for the formation of the neural tube is designated as a *primary organizer;* while the chemical component derived from the midbrain which stimullates the formation of the eye cup is designated as a *secondary organizer.* And yet a third substance, elaborated from the developing eye cup itself and stimulating the formation of the lens, is called a *tertiary organizer.*

To complicate the matter further, the periodicity of the formation of the various portions of the embryo requires us to regard this phenomenon in terms of the competency of the cells to react to stimulation by growth. Thus, while these stimulating substances are elaborated over relatively long periods of time, there are times when the relative quantity of the organizer is at a maximum. Not only must this assumption be made but also it must be conceded that the ability of the cells to react to stimulation is variable, and that there occur periods of heightened susceptibility because the development of tissues and organs occupy a specific temporal relationship one to another. Therefore, to effect perfect development, the organizer must not only be elaborated at the proper time and in the proper quantity but also the cells must be susceptible to their stimulation at the proper time and competent

(From the Department of Pathology, School of Medicine, Medical College of the State of South Carolina, Charleston, South Carolina)

to respond by forming the tissue or organs for which this region is committed.

The relationship of the principles of normal growth to those of abnormal growth has, in the light of recent events, become increasingly important. The chemical similarity between some of the hormonal stimuli to normal growth and the carcinogenic hydrocarbons has been emphasized. This similarity indicates a need for consolidation and reorientation of our knowledge of growth in general. For it is evident that, if we are ever to understand the mechanism of the induction of malignant growth, we must come to an understanding of the factors which are responsible for the maintenance of normal tissue equilibrium.

The tissue equilibrium of normal growth is maintained by a very complicated system of interaction between stimulating factors for growth and inhibiting factors of growth which are located in the cell proper. This limitation of growth is spoken of as the "field forces" and is considered to be under the influence of the genetic composition of the cells. These field forces include not only those factors which determine the species but also the factors which promote organ and tissue differentiation. The maintenance of a biologic equilibrium between stimulating and resistive forces can be upset either by an accentuation of the stimulating mechanisms or by a diminution of the resistive forces. Thus, stimulation can be regarded as either active or passive.

The factors controlling the tissue equilibrium can be experimentally upset as has been proven time and time again by utilizing the artificial agencies referred to as carcinogens The agents capable of inducing malignant growth are very diverse in character and virtually every category of agent has been implicated at one time or another. While no useful purpose would be served by a recitation of the separate agents which have been found to be carcinogenic, it is sufficient to say that they fall into such broad classifications as physical, biologic, and chemical. The chief physical agents are sunlight and x-ray. The biologic agents, chiefly microorganisms, comprise an important group. The most prominent and most extensively studied organism is the virus. The activity of the Shope papilloma virus in the production of malignant skin tumors in rabbits is well known. Equally familiar to everyone are the Rous virus of fowl sarcoma and the virus identified as the milk factor, which is of such great importance in the induction of carcinoma of the breast in mice. The chemical agents form a very large group made up of various chemicals which from time to time have been implicated. The most potent and most commonly used experimental chemicals belong to the class of hydrocarbons. The very diversity of the nature of all these agents would suggest that the alteration which induces malignant growth is not solely an intrinsic property of the stimulating agent but rather there must be a defect in the tissue equilibrium which can be initiated or accentuated by a variety of agents.

The ease with which a given malignant growth can be induced in the laboratory by a given agent varies in different species of animals. For an example, the C3H strain of mice develops cancer of the breast with amazing facility. On the other hand, other strains of mice are resistant to the most powerful carcinogenic agents. Not only does this specie limitation exist, but also there appear great differences within the individual animals in that the site of the development of the malignant process varies from organ to organ. For example, in the C3H strain of mice cited above it is easy to induce a carcinoma of the breast; however, it is extremely difficult to induce a malignant growth in any other organ than the breast. Numerous examples of this principle can be cited, such as the Shope papilloma virus. It regularly produces papillomata in the skin of the rabbit, but will not induce a malignant growth in other species nor will it induce this change in any area other than the skin of the rabbit. Moreover, the wild rabbit is more susceptible than the albino rabbit.

These observations inevitably lead back to the cell and its internal regulatory mechanisms. This regulatory mechanism is thought to be vested in the genetic composition of the cell not only at the level of specie determination, but also at the level of organ differentiation. This idea has been supported by ample experimental evidence. The literature of investigation into the causation of cancer contains reports of extensive work as to just what part of the cell governs the regulation of growth. Many observers believe that this regulation is a function of the chromosomes of the nuclei; others take the view that there are cytoplasmic locations for various inhibitors; while still other investigators are equally convinced that it is in the intracellular cement substance that this regulative force can be found. Because of this confusion we are not able to elaborate a very clear idea as to just the precise location of these regulatory mechanisms; however, all investigators concede that this field force type of regulation of growth potential does indeed exist.

The proposition, therefore, seems reasonably well supported that abnormal growth is a result of an interaction between a carcinogenic stimulus to growth and the genetic control of the cellular metabolism. The stimulus may be of a variable potency and the control mechanism may have a variable stability. This means that a weak stimulus acting on cells of unstable control mechanism may result in a cancerous growth. On the other hand, an extremely powerful stimulus would be required to initiate the process in a stable cell. This principle is accentuated by the fact that certain of the agents, for example x-ray, will produce a malignant growth in almost all species and almost any location. Thus, it appears that only the most stable of tissues can resist the power of this carcinogenic agent. However, since these areas do resist in some instances, it is clear that some field forces are so stable that even this powerful carcinogenic agent cannot induce the

growth of the malignant process.

In contrasting the general principles found in our best explanations of the development of the malignant process with our concepts of normal growth mechanisms we find an absolute parallelism. One could consider the carcinogens as equivalent to the evocators of embryonic development. Indeed, a chemical correlation between the evocator obtained from the dorsal lip of the blastophore has been made with some of the carcinogenic hydrocarbons. One could further consider that the field forces governing cellular competency in embryonic development are the same or analogous to genetic factors governing the stability of the equilibrium producing mechanism of cellular division.

If this line of reasoning be proven to be correct, namely, that the carcinogenic agents are multitudinous in nature and potency, and that the forces producing equilibrium in growth are variable in stability, the search for a single cause of cancer may well prove to be futile.

TEN POINT PROGRAM
OF THE
SOUTH CAROLINA MEDICAL ASSOCIATION

1. Cooperation

To promote closer cooperation and better understanding between all agencies, groups and individuals concerned with providing and improving medical care for the people of South Carolina.

2. Extension of Medical Care

To study constantly the need and availability of medical care in each county of the State and in the State at large.

To promote plans for providing or improving medical care where is a need, particularly in the rural areas.

3. Pre-Paid Hospital and Medical Care

To make voluntary pre-paid hospital and sickness insurance available to all the people of the State (through Blue Cross, Blue Shield, and commercial insurance policies), and to promote the widespread purchase of such insurance.

4. Care of Indigent

To work with local county and state agencies, and with philanthropic organizations, toward securing good medical care for the indigent.

5. Public Health

To support the South Carolina State Board of Health in its broad program of preventing diseases and of safeguarding the health of our people.

6. Health Councils

To support the State Health Council in its announced program. To sponsor the formation of a County Health Council in every county of the state, and to encourage our members to support and to work with these organizations.

7. Hospitals

To promote the expansion of present hospital facilities and the building of new hospitals—where there is a definite need.

To strive for highest standards of professional care in the hospitals in the State.

8. Medical Colleges

To support the Medical College of the State of South Carolina and to bend our efforts toward keeping its standards of education on a par with other medical colleges throughout the country.

To promote good nursing education and good nursing care throughout the State.

9. Education of the Public

To acquaint the citizens of the State with regard to the problems of medical care in existence today, to inform them as to what is being done to solve these problems, and to advise with them as to further plans for securing better health and better medical care for the people of South Carolina.

10. Political Medicine

To prevent political control or domination of medical practice or of medical education.

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JUNE, 1951

$10,000.00

Our Association made a significant and outstanding contribution to medical education in appropriating ten thousand dollars to the American Medical Education Foundation. The action was taken by our Council following the unanimous recommendation of our House of Delegates and the money is to be earmarked for our own Medical College in Charleston.

Whether our medical schools will continue to function as integral and independent institutions or whether they will be subject to federal supervision and subsequent control will depend upon the source from which financial support is obtained.

Medical schools are in a precarious financial condition today. The high cost of living, decreased income from endowments, dimunition of gifts from philanthropic foundations and individuals—all have contributed to the present situation. Some schools are cutting their operating costs to a bare minimum, others are operating at a deficit.

The American Medical Association, meeting the challenge, established the American Medical Education Foundation and made the first contribution of $500,000. State associations and individual physicians are now urged to give and give generously. The California Medical Association was the first to respond with a contribution of $100,000.00. We do not know what other states have done but we are proud to announce our own Association's gift of $10,000.00.

The California Medical Association with approximately 11,000 members has given $100,000, our Association with approximately 1,100 members has given $10,000—each association giving slightly over $10.00 per member. If other state associations would give in proportion a million and a half dollars would be added to the treasury of the Foundation.

$100.00

The goal set for the American Medical Education Foundation this year is $5,000,000. As noted in the editorial above, a third of this amount could be secured from state medical associations. This coupled with the original donation of the American Medical Association would give two million, or forty percent of the goal.

The appeal is now being made to all individual physicians to contribute $100.00 each to the cause. And our own Dr. W. L. (Buck) Pressly, member of the Council on Medical Education and Hospitals, has appointed himself a committee of one to secure that amount from as many of our members as possible. We endorse enthusiastically his efforts and offer him our every support.

Each physician should not only deem it his duty but his privilege to contribute personally to the Foundation. Each one of us secured a medical education for which we paid only a part of the cost. Each one of us is anxious to have our medical schools remain free of federal supervision or control. To repay an obligation of the past and to ensure medicine's freedom for the future—these are the reasons which should motivate our gift.

Those who want to have their part in this movement are requested to make out their checks to the American Medical Education Foundation and to send them to 535 North Dearborn Street, Chicago 10, Illinois; to Dr. W. L. Pressly, Due West, S. C.; or to this office.

OUR NEW LEADERS

At the recent meeting of our Association, several new men were elected to office and they will now play a vital part in our activities.

Dr. J. D. Guess was installed as President, and Dr. Lawrence Thackston of Orangeburg was chosen as President-Elect. A practicing urologist, a veteran of World War I and II, a member of Council for many years, a past president and leader in his county and district societies, Dr. Thackston is fully equipped to give forward-looking and wise leadership.

Dr. J. B. Latimer of Anderson, having completed a long term of service on Council, was elected to the Vice-Presidency. The Association will thus have the benefit of his counsel for another year since the Vice President is also a member of Council.

Dr. N. B. Heyward was re-elected Secretary, Dr. J. H. Stokes, Treasurer, and Dr. J. P. Price delegate to the American Medical Association.

To succeed Dr. Hugh Smith who asked that his name not be considered for re-election, Dr. William Weston, Jr. of Columbia, was elected as the second delegate to the A. M. A. A practicing pediatrician, a past president of the Columbia Medical Society, Chairman of the S. C. Chapter of the American Academy of Pediatrics, a member of the Advisory Committee to the Crippled Children's Division of the State Board of Health, a son of Dr. William Weston, Sr., who has been a member of the House of Delegates of the A. M. A. for a quarter of a century—Dr. Weston is amply qualified to represent us in national councils.

Three new members were elected to Council. Dr. Charles Wyatt of Greenville, Dr. A. C. Bozard of Manning, and Dr. James H. Gressette of Orangeburg. Each of these men is a recognized leader in his district and will bring to the Council judgment based upon sound experience.

At the reorganization meeting Council elected Dr. O. B. Mayer, Chairman; Dr. J. W. Chapman, Vice Chairman; Mr. M. L. Meadors, Business Manager and Counsel; and Dr. J. P. Price, Editor of the Journal.

A JOB WELL DONE

After serving as a member of the House of Delegates of the American Medical Association for six years, Dr. Hugh Smith of Greenville, requested that his name not be considered for re-election.

It has been our opportunity to observe Dr. Smith at work in his task of representing this Association, and we wish to pay our tribute to him. Studious, forward-looking, sincerely honest, ready to fight for what he thought was right, Dr. Smith has been a Delegate of whom South Carolina should be proud.

On behalf of the Association, and of his many friends in this state and throughout the country we say, "Thank you, Hugh, for a job well done."

REPORT TO MEDICAL COLLEGE ALUMNI ASSOCIATION

May 16, 1951

KENNETH M. LYNCH, M. D., PRESIDENT

In the spring of 1944 plans of large and far-reaching proportions and implications, composing what came to be known as the Expansion Program, were launched by laying before the Faculty a breif report stating the principles of what must be done to set the Medical College in its rightful position and to assure the accomplishment of its proper functions and its obligations.

The basis of the structure of that program was, and is, that it is the job of the Medical College to do its part in providing a sufficient number of doctors who have been trained and tried through full and complete educational and training processes. From searching study and calculations, a goal of medical classes of about 80 was set. That goal has been reached. The entering class was increased to 60 in 1944. Seventy will be admitted this year, and at least eighty next year.

Involved in the requirements to attain the objective was, of course, the securing of the proper physical facilities and personnel with which a satisfactory educational and training program could be carried out.

Essentially the whole matter depended upon finding the necessary financial support. The Medical College had no money, and its budget was totally inadequate. That financing has been completed. As of May 4, 1951, the last required financial provision was made.

CONSTRUCTION PROGRAM

Composing the physical facilities required were (a) a hospital of 400 or more beds with associated school of nursing and other essentials of a teaching hospital (b) enlargement of the laboratory, clinic, and library buildings, and (c) housing for students and some elements of the staff. The provision of funds for all of this was completed when the General Assembly which has just adjourned appropriated an additional $351,000.00, to which a $100,000.00 grant from the National Cancer Institute will be added, for the construction of a teaching and research laboratory addition.

As the construction program progressed, other associated institutes and agencies were brought into the development, including a new tuberculosis hospital, for which the contract will be let on June 3, and a public health center. Others will inevitably follow.

The land required was provided by (a) Charleston County, which spent $450,000.00 or more in donating the hospital site (b) the City of Charleston, which closed and donated a street of two blocks' length on the same grounds (c) The Medical Society of South Carolina (Roper Hospital) which donated a site for the school of nursing building (d) the Alumni Association, which provided the land for dormitories (and incidentally made the location of the tuberculosis hospital possible) and (e) the State, which provided $100,000.00 for an additional block.

Altogether the campus for this educational, training, research, hospital, clinic, health and medical center now secured composes an intact area of 18 or more city blocks in the heart of the community.

The amount of money already spent or now in hand for this physical development is $11,301,000. This does not include the existing plant of the Medical College, nor does it include the new Roper Hospital, the tuberculosis hospital and public health center for which at least an additional $2,250,000 will have been spent.

The first contract was for removing some 50 buildings from the hospital site. That has been completed. The first of the major construction contracts has been let. It will be at most a few weeks when actual work will begin. Within a short time we shall be ready to let the contract for the laboratory building, which should be completed in about a year, and shortly thereafter will come the main contract for the hospital superstructure and the school of nursing. This is tied to a time schedule governed by the distribution of the Federal grant and will extend over a period of at least three years. By that time the dormitory and housing project should also have been completed.

STAFF

In an effort to find the means for securing the necessary physical facilities, it was not lost to sight that unless these were to serve as the workshop of a competent staff, the effort and money would be wasted. Brains rank bricks, but a place and tools must be supplied for the use of brains or that primary requisite would likewise be wasted.

To date the administrative organization and every department have been either entirely rebuilt or satisfactorily augmented. Department heads, associates, assistants and technical helpers have been gathered, which accomplishment, if I should express pride in anything, would come first. The full-time staff, upon which present day medical training is absolutely dependent, has been more than doubled. It now constitutes 28 of professorial rank and 30 associates, instructors and fellows, a total of 58 of teaching responsibility, to say nothing of a full corps of technical and administrative assistants.

These people have been provided with suitable conditions and equipment, and this year around a quarter of a million dollars, twice the amount of the total former budget, supports a varied and creditable research program.

I know of no comparable institution with superior staff, standards, organization, opportunity and product.

BUDGET

Needless to say, financing this accomplishment has been a task requiring tireless attention.

In the spring of 1944 the state appropriation had been set at $110,000.00, and even that was seriously threatened.

The funds provided for the operational budget of the Medical College for the coming year amount to more than $1,000,000.00, nearly ten times what the legislature had set in 1944, or an increase of nearly 1000%, if it may be figured that way.

Not only has the South Carolina General Assembly appropriated the capital outlay for the construction program, but for the eight consecutive sessions concerned, it has provided every cent requested, a record that I doubt has ever been equalled anywhere.

ACKNOWLEDGMENTS

A large number of individuals, organizations and agencies, as well as the governments of city, county, state and national levels, have helped as we have gone along, some at crucial times, some continuously. I would like to call a roll of the names of people who have occupied important parts. I have thought much of ways to reward or at least to acknowledge those who have offered themselves or who have responded to call.

There is no means for such compensation—the reward to them can only be in the satisfaction that comes within the heart and mind from a consciousness of having served and given of one's self.

Perhaps I might risk here an acknowledgment of a deep and abiding sense of gratefulness to the four governors and to the state legislatures of each session for listening, seeing, believing and supporting. And to the present Board of Trustees and Faculty, who have not faltered. And to the South Carolina Medical Association which gave initial backing and which on yesterday took a very significant action in appropriating to the Medical College $10,000.00 "for use in increasing enrollment."

To the Alumni Association which has contributed in a large material way, and individually to its members, with nearly all of whom I have had the privilege and honor of intimate association, I am happy to report upon a mission that is in a very definite sense successfully completed.

THE TEN POINT PROGRAM

M. L. MEADORS, DIRECTOR OF PUBLIC RELATIONS AND COUNSEL

TEN THOUSAND TO EDUCATION FOUNDATION

Of vital interest and importance to the medical profession was the decision by the Council of the South Carolina Medical Association, with approval of the House of Delegates, to contribute the sum of $10,000.00 to the National Education Foundation of A. M. A. By this action the State organization takes its place with several other State Medical Societies which have made substantial contributions to this fund. The sum is at the ratio of approximately $10.00 each, for the dues-paying members of the State Association and percentagewise will compare favorably with the amount of contributions from some of the larger organizations, located in much more highly developed areas of the country.

In thus contributing a substantial amount to the fund instituted last December by the Action of A. M. A.'s Board of Trustees, the State Association is participating, and is keeping pace with other component societies in the profession's movement toward solution of the most immediately pressing problem with which we are concerned. It is through unjustified attacks upon the profession's attitude toward the education of doctors that the opponents of free medical practice have done most damage within recent months. The next step—if it can be accomplished—will be the passage of the bill to provide Federal Aid—and control—for medical schools. If the medical profession, through the National Education Foundation, can forestall that action it will have removed one serious threat of Federal domination of medical training and practice, while at the same time it makes provision for assistance which actually is much needed by the Medical Schools. And in so doing it will give an undeniable answer to the false charges which have been made to the effect that the organizations of the profession have tried to limit the number of physicians and discourage their increase.

In authorizing this contribution to the cause of Medical education, the South Carolina Medical Association specified that the amounts be allocated, if possible, for the use of the Medical College of South Carolina. It is understood that such allocation is provided for in the rules governing acceptance of contributions by the Foundation. As soon as assurance is obtained that it will be given recognition in this instance the remittance will be sent.

This points up the value to the State Association of maintaining a substantial financial reserve for use when the occasion arises—in advancing the best interests of the members of the Association and the profession as a whole.

Twice within two years the State organization has had occasion, and has been in position to supply the sum of $10,000.00 for worthy causes related to the welfare of profession and public alike. The other instance was the loan without interest to the South Carolina Medical Care Plan for its initial capital, upon its organization last year. That was not a donation but an investment, represented by promissory note which is payable on demand.

Accumulation of such reserves has been possible only through the current dues and amounts earned from Journal advertising.

PALMETTO ASSOCIATION REQUEST TO BE STUDIED

There was brought to the Council of the South Carolina Medical Association at the annual meeting in May, a Resolution of the Palmetto Medical, Dental and Pharmaceutical Association of the state requesting admission to membership in our organization of negro physicians licensed to practice medicine in South Carolina who are in good standing in their own Association.

The Council gave the matter serious consideration and recommended to the House of Delegates, the following Resolution which was adopted. As a result, the suggestion will be given further serious study within the coming months.

The matter is one which deserves careful thought, and that it will receive this, is assured by the decision to refer it to the Committee appointed for the purpose. Undoubtedly, a solution satisfactory to all parties will be obtained as a result.

The Resolution:

WHEREAS: The Palmetto Medical, Dental and Pharmaceutical Association of the State of South Carolina has memorialized the South Carolina Medical Association requesting that negro physicians licensed to practice medicine in South Carolina and who are in good standing in the Palmetto Medical, Dental and Pharmaceutical Association be granted the privilege of membership in the South Carolina Medical Association, and;

WHEREAS: the House of Delegates recognizes the factuality of statements made in the preamble to the resolution requesting such privilege of membership, but;

WHEREAS: it is recognized that there are many difficulties involved in granting this privilege which will require serious study for their resolution, and realizing further that some of these are beyond the power of the State Association to remove;

Now, THEREFORE BE IT RESOLVED that a committee consisting of the President, the Chairman of the Board of Trustees of the Medical College of the State of South Carolina, and the senior delegate of the state association to the House of Delegates of the American Medical Association be designated to serve with a committee from the Palmetto Association and to study this entire matter from all angles and to report back with recommendations at the 1952 meeting of the House of Delegates.

JOHN TEMPLE GRAVES IS BANQUET SPEAKER

"When the history of socialism's defeat in America is written—and it is most certainly going to be written—it may well be reported that America's men of medicine were her embattled farmers at Bunker Hill and also her finishing-touchers at Yorktown.

"May it be said, too, that you doctors, whose influence is infinite because we feel so tender and special about you, arrived ahead of the rest of us at that fine but sure line that must divide social-mindedness from socialism, human welfare from the welfare state. You are doing it with your increasing sense of the economic problem in medicine for the masses and in your many co-operations towards what Winston Churchill called the "magic of percentages" for insurance against the high cost of being sick.

"If there is hope of peace and survival today, if men are anywhere still free and have promise of remaining free, it is not because of the United Nations, much as we might wish it to be and hope that someday it may be. It is because the United States of America is strong.

"What makes America strong is primarily its atomic stockpile, but beneath and beyond that, the secret is the great economy of America, this magic economy with which lately we have fought two allies and ourselves, producing more civilian goods than ever before and coming out with more wealth, more technology, and more plain human welfare, than any other nation on the face of the earth.

"The strength of this American economy depends on individual character, the character socialism takes away. You don't have to have character to be a communist. You just memorize the party line and take care not to deviate lest you liquidate. You don't have to have character to be a fascist. You just march along in ranks singing your silly song, wearing your silly feather or cap or Ku Klux Klan regalia, overcome by somebody else's false emotion. But you do have to have character—and science and freedom, too—to be democratic and self-governing in the deadliest world that ever was, with Russia and the split atom to be contained. You have to have the character to be honest, to be morally responsible, to be capable of aggressive appreciations, to live dangerously, and to have faith in the way of America and the future of the world."

So spoke John Temple Graves, well-known lecturer and widely-read columnist, at the Annual Banquet of the S. C. Medical Association, at Myrtle Beach on the evening of May 16th.

The sample quoted was a part of the thought-provoking address which, unfortunately, we are unable to reproduce in full. Mr. Graves' remarks demonstrated his wealth of information on and close observation of the significant events of the day, and the sound thinking which he applies to their analysis. Mr. Graves, one of the best-known Southern columnists and speakers, writes a daily column which appears in twenty-five newspapers in the South. A resident of Birmingham, Alabama, he has a true understanding of the Southern viewpoint and speaks with authority on subjects of public interest in the South.

The manifest interest and enthusiasm of his audience at Myrtle Beach attested the wise judgment of the Committee in his selection as the speaker for the occasion.

ANNUAL REPORT OF CHAIRMAN OF LEGISLATION COMMITTEE OF THE WOMAN'S AUXILIARY

The report of the Chairman of Legislation of the Woman's Auxiliary to the South Carolina Medical Association is in line with the program presented by Mrs. Edgar E. Quayle, Chairman of Legislation of the Woman's Auxiliary to the American Medical Association and with the objectives outlined by the National Education Campaign of the American Medical Association. Interest in medical legislation was stimulated in the counties through the tireless efforts of our State President, Mrs. A. F. Burnside, who in her visits to our twelve county units explained the legislative work and objectives in detail and urged active participation by all members.

During the summer of 1950 the entire State Auxiliary was alerted by telegram, telephone and by postal card reminders to vote in the Democratic primary elections and to support only those candidates who were actively opposed to compulsory health insurance and any other form of Government-controlled medicine. It is felt that one candidate in particular, an aspirant for Congress and a man not in sympathy with the policies of the American Medical Association, was overwhelmingly defeated largely through the efforts of the Medical Association, the Medical Auxiliary and the people whom they were able to influence.

Various educational methods were used to stimulate interest in fighting compulsory health insurance. Without the able assistance of the National Education Campaign this work would not have been possible. Several counties supplied local radio stations with talks prepared by the National Education Campaign to be used by their personnel at appropriate times. Greenville County Auxiliary held an open meeting in March. Members of local organizations were invited to hear Mr. M. L. Meadors, Director of Public Rela-

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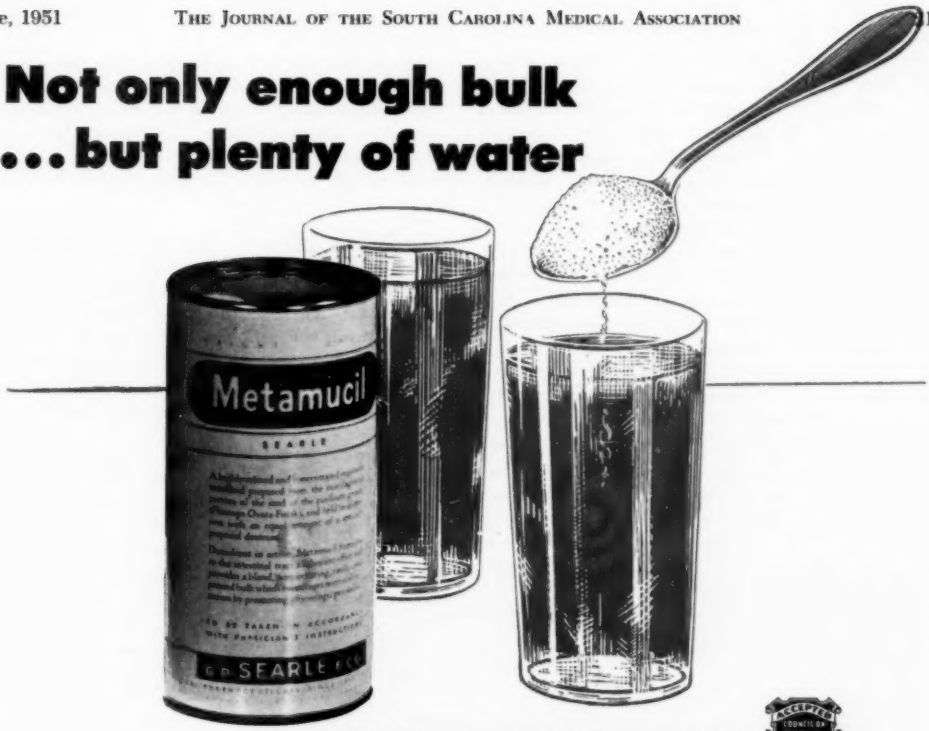

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SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

tions and Counsel for the South Carolina Medical Association, speak on compulsory health insurance. The members of the Charleston County Auxiliary were fortunate in obtaining Mrs. A. F. Burnside, State President, as a speaker on compulsory health insurance at one of their early fall meetings. Richland County Auxiliary sponsored two radio programs in connection with the observance of Doctors Day. A thirteen-minute talk, entitled "Medical Progress or Medical Poverty" was presented by Dr. R. W. Ball of the State Health Department. A three-minute talk, "The Meaning of Socialized Medicine" was presented by Mrs. Manly E. Hutchinson, Chairman of Legislation. Two hundred cards advertising these programs were mailed to labor leaders, welfare workers, service clubs, civic organizations and other clubs.

Another educational feature of the Richland County Auxiliary was the program at which Mrs. Mary McGinn Taylor of the National Education Campaign appeared as guest speaker. Invited to attend a luncheon as guests of the Auxiliary to hear Mrs. Taylor in November 1950 were all South Carolina Auxiliary county presidents, and county chairmen of legislation and leaders of the following local women's organizations: Woman's Club, American Legion Auxiliary, Young Women's Christian Association, Garden Club Council, Columbia Chapter of the American Association of University Women, League of Women Voters, Second District President Parent-Teacher Association, State President Parent-Teacher Association, State Regent Daughters of the American Revolution, State Parliamentarian United Daughters of the Confederacy, State President South Carolina Federation of Women's Clubs, and others.

During the week of October 8, 1950 our twelve county auxiliaries cooperated with the National Education Campaign of the American Medical Association by means of a state-wide distribution of pamphlets and literature on compulsory health insurance. Thousands of pieces of literature went out with orders from drug stores and with books from the public libraries. Pamphlets were left for distribution at school libraries, beauty parlors, barber shops, hotel lobbys, banks, grocery stores and with various civic clubs and other organizations, particularly Parent-Teacher groups.

An extensive drive for endorsements against compulsory health insurance was conducted. Only women's organizations were approached. Counties participating in this work had their methods individually approved by local medical societies. Richland County Auxiliary made requests from one hundred and fifty local organizations. Greenville County Auxiliary made requests from twelve organizations and Edisto County Auxiliary from two organizations, making a total of one hundred and sixty-four requests. Charleston County Auxiliary did special work with the Health Councils of the Charleston Parent-Teacher organizations and were promised support by them at their State meeting. The response to our requests for endorsements was not satisfactory, the cause being attributed to indifference and inertia on the part of organizations rather than to a feeling of sympathy for compulsory health insurance. Furthermore, local newspaper publicity on political medicine has not been broad enough to make the people sufficiently aware of the need for action.

Particularly aggressive work was done by the State Auxiliary with the South Carolina Nurses State Nurses Association, the South Carolina Congress of Parents and Teachers and with the South Carolina Branch of the American Association of University Women. The South Carolina State Nurses Association went on record only as "approving the Voluntary Plan in keeping with the Platform of the American Nurses Association." In view of the affirmative position taken by this Association, a second letter was written to the president, Miss Ruth Chamberlin. This letter was written at the request of Miss Audri Ursin of the National Education Campaign. We were requested to ask the Association's president to reopen the issue of compulsory health insurance at the Council meeting of The American Nurses Association. The Association president replied that her Board had reconsidered the original stand taken by their group and had decided to make no change. Furthermore, she was not granted permission to attempt to have the issue of compulsory health insurance reopened at the Council meeting of the American Nurses Association. A third letter was written to the Association's president requesting that each District in the State be allowed to take a stand either endorsing the original action taken at their State Convention or to recommend that the issue be reconsidered at the next State Convention. A reply from the president stated that the matter would be taken up again at the next Board meeting though "The fact that we do not word our thoughts in the negative but say the same thing in a positive manner is a right which we reserve as an organization."

Again our efforts with the South Carolina Congress of Parents and Teachers was exhaustive but unsuccessful. After numerous attempts to interest the State President in our cause, we decided the work must be done on a local level. Recommendations were received from three P.-T.A. groups in Columbia requesting that the State Congress place on their agenda for consideration at their annual convention resolutions against compulsory health insurance. These recommendations were introduced at a Second District meeting and immediately blocked by their State President, Mrs. T. J. Mims of Greenville. A report of this meeting was sent to National Education Campaign headquarters. A statement of policy by the National Congress of Parents and Teachers in regard to endorsements against compulsory health insurance was obtained for us from one of the directors of their National office. This information was forwarded to Mrs. Mims and other State P.T.A. leaders. An attempt was then made to have resolutions presented for approval to the Executive Committee of the State

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Congress by their Chairman of Legislation, Mr. A. C. Flora. Mr. Flora requested that information be given him on the constructive work being done in the state for the medically indigent and work being done to increase the number of physicians in South Carolina. This was done, material being secured from Dr. O. B. Mayer, Chairman of the Council on Medical Services, from Mr. M. L. Meadors, Director of Public Relations and Counsel for the South Carolina Medical Association, from the State Board of Health and from the National Education Campaign. After a careful study of this material, Mr. Flora agreed to have the presentation made to the Executive Committee in his anticipated absence by Mrs. Paul Leonard, who all year had been working in our behalf. The recommendation was forcefully presented by Mrs. Leonard. Mrs. Mims immediately said that the South Carolina Congress could take no action on the matter. She was supported by the Executive Committee. The Greenville P.T.A. had been sent a generous supply of literature (P.T.A. Kits) for distribution at the general meeting.

The results of our work with the South Carolina Branch of the American Association of University Women was also unsuccessful. Personal as well as form letters and informative material were sent to the State President, the Chairman of Legislation and to each of the District Presidents. Personal contacts were made with key persons in the organization. A generous supply of A.A.U.W. Kits prepared by the National Education Campaign was presented for distribution at the general meeting. Our request was presented at the State Convention, but no action was taken.

The South Carolina Medical Auxiliary owes a debt of gratitude to Mrs. Mary McGinn Taylor and to Miss Audri Ursin of the National Education Campaign for their active work with the leaders of these organizations and for the material with which they so generously supplied us at the State Conventions. Though we were unsuccessful in obtaining resolutions from these organizations this year, we feel that much valuable work has been done in an educational way and that perhaps the seeds have been sown for action at a later date.

A communication from the State Regent of the South Carolina Chapter of the Daughters of American Colonists informs us that the State Chapter automatically endorses the action of the National organization, which has already taken favorable action. An offer was made by the State Regent to request that the three State Branches go on record. This offer was gratefully acknowledged.

A request has also been made that a study of compulsory health insurance be made by the South Carolina Council for the Common Good, a legislative study group with a membership of 2,000,000 persons. This request is under consideration and will more than likely receive favorable action, according to their president.

A request has also been made that a study of compulsory health insurance be made by the Columbia League of Women Voters and the same request will be made of the State League as soon as that group has been fully organized.

Resolutions have also been requested from the South Carolina Dental Auxiliary, from the South Carolina Pharmaceutical Auxiliary, from the South Carolina W.C.T.U., from the South Carolina Farm Women, and other groups.

Endorsements have been received and acknowledged from the following State organizations during the past year: The Garden Clubs of South Carolina (Executive Committee) with a membership of more than 8000 members, South Carolina Chapter of the Daughters of 1812, South Carolina Chapter of the Daughters of the American Revolution.

Endorsements from the following local organizations have been received and acknowledged: the Iris Garden Club, the Nibiscus Garden Club, the Grape Myrtle Garden Club, the Eau Clair Music Club, the South Carolina Baptist Hospital Alumnae, City Union of the Kings Daughters and Sons, Columbia Chapter of the United Daughters of the Confederacy, the Home Arts Club, and recommendations from the A. C. Moore P.T.A., the McMaster P.T.A. and Brennen P.T.A.

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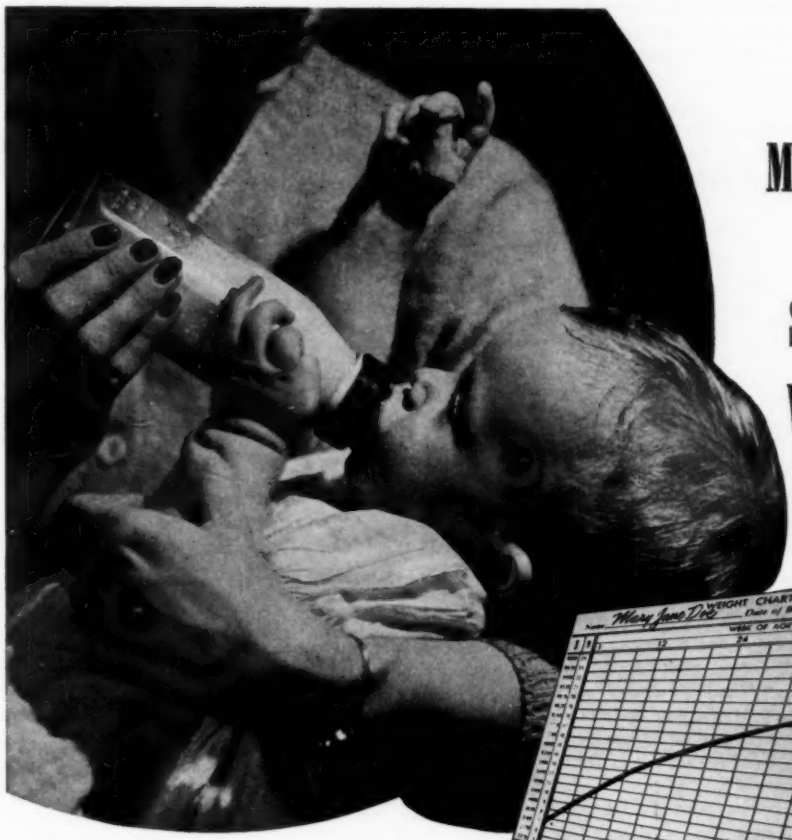

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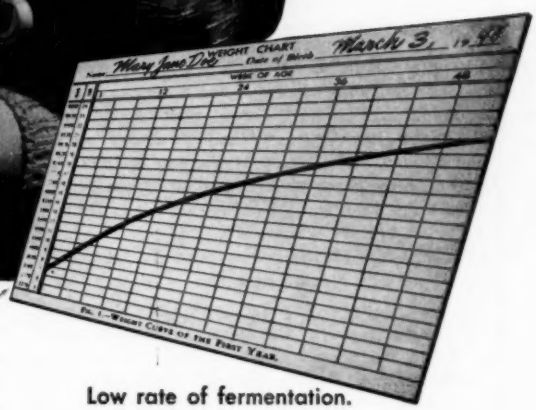

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As chairman of legislation I attended a meeting of the South Carolina Council for the Common Good and the South Carolina White House Conference.

Quarterly reports on the progress of the work of the Committee on Legislation and reports on the status of socialized medicine were contributed regularly to the "Bulletin" of the South Carolina Medical Auxiliary and to the "Journal" of the South Carolina Medical Association.

Copies of this report have been mailed to the Chairman of Legislation of the Woman's Auxiliary to the American Medical Association, to the National Education Campaign of the American Medical Association, to Dr. Julian P. Price, Editor of the "Journal" of the South Carolina Medical Association; to Mr. M. L. Meadors, Director of Public Relations and Counsel to the South Carolina Medical Association; to Dr. O. B. Mayer, Chairman of the Council on Medical Services for the South Carolina Medical Association.

Respectfully submitted,
Mrs. Manly E. Hutchinson
Chairman of Legislation

THE TERM "SOCIALIZED STATE"

The manner in which members of the Medical profession, including officers of the American Medical Association, are leading the way toward sound thinking on the most vital internal problems of this country today, is strikingly typified in a recent exchange of correspondence between Dr. Elmer Henderson, A. M. A. President, Mr. Oscar Ewing and others. The discussion revolved around a publication prepared several years ago for the Federal Security Administration and recently distributed again.

The campaign to maintain the free Democratic state is being waged by the Medical profession in the only sound manner in which it could be waged—through the process of education of the people of this country, including some of its educational and political leaders. Because it illustrates this point so aptly, we are quoting in full below the recent letter from Dr. Henderson to Mr. Edward Parsons of the George Warren School of Social Work of Washington University.

May 21, 1951
Mr. Edward Parsons, President
Social Work Club
George Warren Brown School of Social Work
Washington University
St. Louis, Missouri

Dear Mr. Parsons:

Your kind letter of April 26, regarding the F.S.A. booklet, "Common Human Needs," would have received an earlier reply except for the fact that I have been in Europe for the past several weeks.

I protested the statement: "Social Security and public assistance programs are a basic essential for attainment of the socialized state envisaged in a democratic ideology, a way of life which so far has been realized only in slight measure," solely on the basis of what it says specifically.

Let me say first that I appreciated very much the tone of your letter, and that I wholeheartedly agree with your statement that "man remains to a certain degree dependent upon his fellow men." However, I cannot agree that this is the connotation most thoughtful people today get from the controversial declaration concerning "attainment of the socialized state, etc."

The "politico-economic" construction, as you term it, unquestionably is the construction placed on the statement today by the majority of people. And since that is the case, though the term may mean something quite different to the earnest social worker, perhaps if it is necessary to use it, in these times it should be clarified or modified somehow to carry the precise meaning intended, and not the meaning currently attached to it.

I agree with Miss Helen Wright of the National Conference of Social Work, that "the sentence could quite easily have been rewritten to make the meaning clear." If the booklet, "Common Human Needs" is needed as a text book for social workers, I think that it should be carefully edited to eliminate such objectionable material before it is released.

I believe you will concur in the belief that social workers, like doctors, can do great injury when they are careless in diagnosis, or even careless in the words they use to report their diagnosis. All of us, particularly doctors, recognize the need of assistance to the unfortunate and most physicians give freely of their time and services to help those who are in financial as well as physical distress. However, it seems to me that social workers, perhaps more than any other group, need to be exceedingly careful that they do not further the dangerous philosophy of needless dependency on the Government in meeting individual problems.

The statement in question, frankly, was generally interpreted as favoring the socialized state, a system which is causing world-wide struggle, and deploring the fact that it has not made greater progress in our country. It had been so viewed in Congress before I spoke out on the subject, and was first brought to my attention as a result of criticism of the declaration there. I am enclosing a comment from the Congressional Record on the matter. Also copies of the final exchange of telegrams between Mr. Ewing and myself concerning the pamphlet.

The destruction of the pamphlets carrying the statement, by the way, was at Mr. Ewing's own volition, not in compliance with any suggestion made from here. We are, however, very grateful to Mr. Ewing for his disavowal of the principle which was being attributed to him as a result of the contested statement.

I was exceedingly shocked to read in a recent issue of the Louisville Courier-Journal that the American

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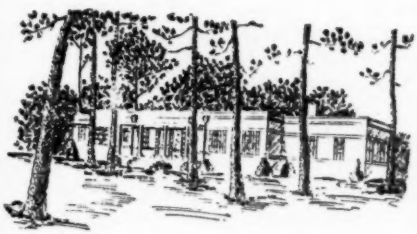

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Association of Schools of Social Work, meeting at Atlantic City, had described Mr. Ewing's withdrawal of this booklet as "indefensible" and the result of the misunderstanding of the word "socialize." I believe the Association would serve the profession and our country well if it frankly admitted that a mistake had been made and set out to correct it. In this same action, the Association was quoted as saying that "the word, 'socialized', in this sentence has no political significance."

Quite to the contrary, to all thinking people today, the term "socialized state" has very real political significance.

I think perhaps public usage, public understanding and the changing world about us, has had a semantic effect here which your good association might well note.

Thank you very much for your letter.

Most sincerely

Elmer L. Henderson, M. D., President
American Medical Association
cc: Miss Helen Wright

MORTALITY RATES IN 1950

In 1950, a year of record low mortality, the Metropolitan Life Insurance Company paid $288,000,000 to the beneficiaries of deceased policyholders. This sum exceeded by $19,000,000 the disbursements in 1949 and was almost $112,000,000 greater than those of only a decade ago. These increases represent the long-term growth both in the number of insured and in the average amount of Life insurance owned by individual policyholders.

The chronic diseases are responsible for the largest part of the death claim payments. Actually $7 out of every $10 disbursed last year was for deaths from the cardiovascular-renal diseases and from cancer.* The total paid on account of these diseases came to more than $200,000,000.

The cardiovascular-renal diseases alone were responsible for well over one half of all the money paid in death claims by the Company last year. In fact, the diseases of the coronary arteries and the other diseases of the heart each ranked above every other cause of death. The sum paid on the deaths from the diseases of the coronary arteries and angina pectoris amounted to $67,000,000, or 23 percent of the total in 1950. Ten years earlier they accounted for only 13 percent of all death claim disbursements. The increase in the relative importance of these diseases is due, in part, to the rise in the average age of the insured, but, in greater measure, to more frequent recognition and reporting on death certificates. The disbursements in 1950 for deaths from cerebral hemorrhage came to $21,500,000 and for chronic nephritis to $11,900,000.

Cancer ranks second to the cardiovascular-renal diseases with respect to death claim payments. In 1950 this cause accounted for disbursements of about $48,500,000, or for 17 percent of the total, essentially the same proportion as in 1949. If the payments for deaths from leukemia and Hodgkin's disease are included, the malignant neoplasma as a group accounted for almost $1 out of every $5 paid on death claims last year. Diabetes follows cancer in the list of diseases, but in terms of actual amounts paid the gap between the two is very considerable. In 1950 about $9,000,000 was paid on account of diabetes; this was 3.2 percent of the total.

The marked reduction in the mortality from pneumonia and influenza and from tuberculosis is clearly evident in the record. Despite the large increase in total disbursements by the Company in the past 10 years, the amounts paid for these diseases were considerably less in 1950 than in 1940. For pneumonia and influenza the proportion of all payments dropped from 3.8 to 1.6 percent in the 10-year period and for tuberculosis from 4.2 to 1.8 percent. Appendicitis, diseases of the puerperal state, syphilis, and the communicable diseases of childhood likewise showed large declines.

The payments on account of poliomyelitis vary from year to year in accordance with the annual fluctuations in the death rate. In 1950 the Company paid nearly $500,000 on deaths from this disease. This compares with more than $740,000 the year before and with only $120,000 in 1940.

One dollar in every ten paid in 1950 was for deaths resulting from external causes. Payments for suicide came to $5,000,000, for homicide to $1,500,000, and for accidents to about $23,000,000. For motor vehicle accidents alone disbursements were about $10,700,000. Payments for deaths from enemy action appear again in the table of disbursements, amounting to nearly $600,000 in 1950.

In the Ordinary and Industrial Departments $4,300,000 was paid on policies which had been in force less than one year. In one third of these cases the policies had been in force less than three months.

The benefits of Life Insurance are further evident from the data on death claim payments according to the policyholders age at death. More than $191,000,000 or two thirds of the total, was paid in 1950 to beneficiaries of policyholders who died before reaching age 65. Of this total, more than $144,000,000 was paid for policyholders who died between the ages of 45 and 64 years and well over $47,000,000 for those who failed to reach age 45.

*The specific causes used in this article are based on the tabulation of deaths according to the Fifth Revision of the International List of Causes of Death in order to preserve the comparability of the figures for 1950 with those prior years.

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● As a doctor, you are familiar with the confirmatory tests necessary to prove a fact. Why not apply this principle to your choice of a cigarette? Why not make your own 30-Day Camel Mildness Test?

It's a sensible cigarette test! No tricks — no one-puff decisions! You smoke Camels regularly—for 30 days. *Then* you decide! Yes! Make a thorough day-after-day, pack-after-pack test of Camel's choice tobaccos. Find out over a reasonable period of time how mild a Camel can be—how good tasting Camels are! Find out in your own "T-Zone". Compare Camels for mildness and for flavor. See if the 30-Day Camel Mildness Test doesn't give you more smoking enjoyment than you've ever had from any other cigarette!

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PUBLIC HEALTH NEWS

DIETETIC INSTITUTE

On Friday, April 13, 1951, The South Carolina Dietetic Association sponsored a Dietetic Institute to which all those in charge of dietary departments of hospitals, nursing homes, and children's homes, were invited. Miss Margaret Freeman, Consultant Dietitian of the State Board of Health, and Mrs. Anna Watson, President of the South Carolina Dietetic Association, were in charge of the meeting.

There were fifty-seven present at the meeting, which was held at the State Hospital in Columbia.

The guest speaker for the morning session was Miss Charlotte Mobley, Home Service Director, Duke Power Company, Charlotte, N. C., whose topic was "The Use and Care of Equipment." Miss Mobley said that cooking foods at too high a temperature, especially meats, ruins the flavor, and also wears out the stove more quickly. She also stressed the fact that it is a good idea to take good care of equipment more than ever now that it is apt to become harder to get and more expensive because of the war situation. Such simple matters as cleaning the refrigerator condenser with a small brush, having electric mixers serviced when they begin to drip oil, having heavy duty equipment checked by a competent person, will prove to be wise measures, she said.

Miss Frances Eddy, President-Elect of the S.C.D.A., presided during the afternoon session.

Dr. Donald E. Lundberg, Head of the Restaurant and Hotel Management Dept., Florida State University, Tallahasse, Florida, spoke on "Personnel Management," especially "How to Give Orders." Some pointers he gave were:

1. Let the workers believe that they are creating something worthwhile and try to make the work set-up a pleasant situation.
2. Discuss changes with the workers before putting them into effect.
3. Never argue about any order at all.
4. Never use ridicule or sarcasm in giving an order.
5. The person giving the order must have the appearance of self-assurance and believe that the order is right.
6. Lighten up the work situation with some humor. Laugh with the employees—and at yourself sometimes.

Two army films on "Hospital Service Personnel Training" were shown.

The meeting was concluded with a tour of the State Hospital.

DEATHS

JOHN WILLIAM CARROLL

John William Carroll, 73, died at the Berkeley County Hospital on May 4, following an illness of three weeks.

A native of North Carolina, Dr. Russell was graduated from North Carolina State College and from the University of Maryland Medical School in 1903. After practicing in North Carolina Dr. Carroll moved to Russelville, S. C., where he engaged in general practice up to the time of his death.

Dr. Carroll is survived by his widow, the former Miss Mattie Eliza Dunn, one son and one daughter.

WILLIAM TERTIUS LANDER

Dr. William T. Lander, 90 died at his home in Williamston on May 15.

Born in North Carolina, Dr. Lander moved to Williamston in 1872 and made this his home until the day of his death. His father was the founder of Lander College, Greenwood.

A graduate of the Medical College of South Carolina (Class 1910), Dr. Lander was a general practitioner and up until his declining years was most active. Even after he had given up active practice he was keenly interested in medical affairs and on more than one occasion wrote interesting letters to the Editor of this Journal, commenting on the Ten Point Program and the work of the Association.

Dr. Carroll is survived by his widow, the former Miss Susie Rumph, two daughters and a son.

JAMES LEE YOUNG

Dr. James L. Young, 70, retired physician of Clinton, died on May 14.

A native of Laurens County, Dr. Young received his education at Presbyterian College and University of Maryland Medical School (Class 1902). After receiving his degree he opened an office for general practice in Clinton and continued to carry on his profession there until his retirement five years ago.

Dr. Young is survived by his widow, Mrs. Annie Lou Abell Young, and one son.

NEWS ITEMS

Four Charleston surgeons were made fellows of the Southeastern Surgical Congress at the recent meeting held in Hollywood, Florida: Drs. F. H. Stelling, 3rd, C. B. Thomas, S. M. Wilkes, Jr., and David P. Reese.

Dr. Wm. S. Brockington, Greenwood, presented a paper, "Xeroderma Pigmentosum, Hereditary Factor in Skin Cancer," at the Southern Surgical Congress in Hollywood, Cal.

Dr. A. C. Alston, Greenwood, has recently started a two year residency in surgery at the Wycoff Heights Hospital, New York.

Dr. Harold Jervey has recently opened his office in Columbia.

Upon completion of his residency in surgery at The McLeod Infirmary, Florence, Dr. James W. Wideman will become chief of surgery at the James L. Martin Hospital in Mullins.

SOUTH CAROLINA SURGICAL SOCIETY

Dr. William H. Prioleau, of Charleston, was elected president of the South Carolina Surgical Society at the opening session of its third annual meeting. Dr. C. R. F. Baker, of Sumter, was elected vice president. Dr. William C. Cantey, of Columbia, will hold over another year as secretary-treasurer.

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The higher protein content of normally diluted Dextrogen—2.2% instead of 1.5% as found in mother's milk—satisfies every known protein need of the rapidly growing infant. Its lower fat content makes for better tolerability and improved digestibility.

Dextrogen serves well whenever artificial feeding is indicated, and is particularly valuable when convenience in formula preparation is desirable.

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Spartanburg was selected for next year's meeting. New members elected last night were Drs. George Bunch, Jr., and DuBose Eggleston, of Columbia; Drs. Robert Thompson and Samuel Wilkes, of Greenville; Dr. William Byerly, Jr. of Hartsville, and Dr. William Armstrong, of Georgetown. This brings the membership to 34.

Dr. Melvin H. Knisely, professor of anatomy at the Medical College of the State of South Carolina, addressed the annual dinner, which followed a social hour. He was introduced by Dr. Kenneth M. Lynch, president of the college.

The scientific session consisted of the following papers:

Dr. Frederick E. Kredel, The Treatment of Myelo-Meningocele.

Dr. John M. Brown, The Use of Peridural Anesthesia in Thoracic Surgery.

Dr. William H. Prioleau, Rectosigmoid Anastomosis by Invagination in Chronic Inflammatory Diseases.

Dr. Daniel L. Maguire, Jr., Bile Peritonitis—Sequelae and Treatment.

Dr. Henry Mayo, The Rationale of the Short Afferent Jejunal Loop in the Performance of Gastric Resection for Peptic Ulcer.

Dr. Edward F. Parker, The Surgical Treatment of Congenital Cardiovascular Disease.

BIRTHS

Dr. and Mrs. Jenkins Mikell of Columbia have announced the birth of a son, Pinckney Venning, on May 6, at the Columbia Hospital.

Dr. and Mrs. P. F. LaBorde of Columbia, are also being congratulated upon the birth of a son, born April 19.

WOMAN'S AUXILIARY
SOUTH CAROLINA MEDICAL ASSOCIATION

President: Mrs. A. F. Burnside, Columbia, S. C. **Publicity Secretary: Mrs. Weston Cook, Columbia, S. C.**

ANNUAL REPORT OF WOMAN'S AUXILIARY TO THE SOUTH CAROLINA MEDICAL ASSOCIATION
1950-1951

As the Auxiliary year 1950-51 comes to a close, it is with mixed emotions that the President relinquishes the duities of her office. A keen awareness of the responsibility of leadership and guidance to such a fine organization and the confidence that the presidency carries have been an inspiration to greater effort. The welfare of the Auxiliaries has been foremost in my thoughts and actions during the past year. The President and the President-elect have worked very closely in the interest of the Auxiliary and it is satisfying to know that my successor will have your interest at heart. It has been a good year and your President is happy to review some of your many accomplishments.

South Carolina is organized in accordance with the national plan. We have 580 members (24 members-at-large), comprising thirteen sectional units. Nine of which are County Auxiliaries and four are District Auxiliaries. We are proud to announce the organization of a new County Auxiliary, The Woman's Auxiliary to the Newberry County Medical Society.

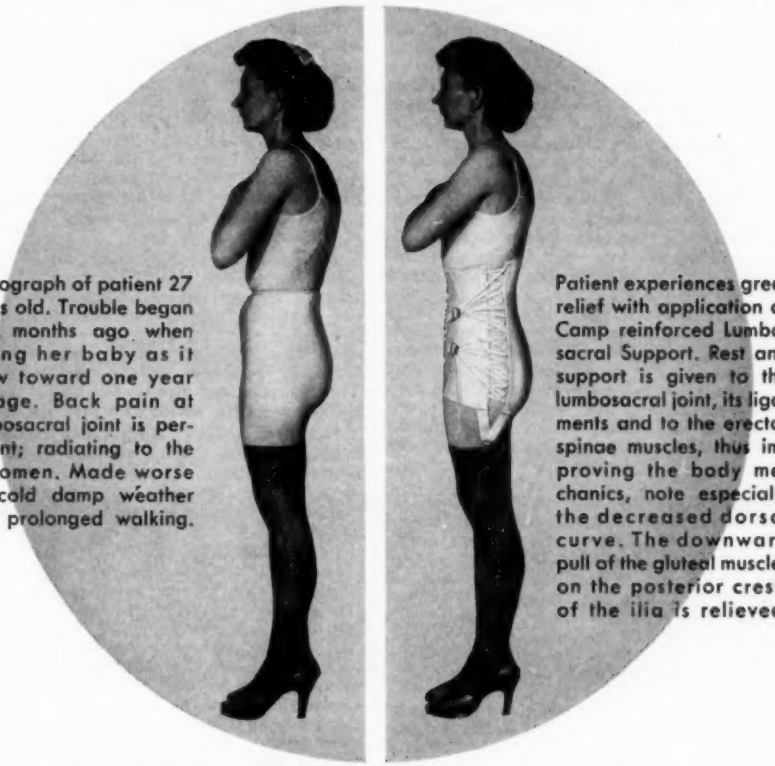
The State President has kept in close touch with the work of the County Auxiliaries and discussed with the individual auxiliary topics of special interest to that group. Twelve County Auxiliaries were visited during the year. The kind invitations and the many courtesies shown the State President during these visits are deeply appreciated.

A special guest of the State Executive Board in October, 1950 was the President of the Woman's Auxiliary to the Southern Medical Association. Interest in plans for the year's work was shown by the excellent attendance of 33 members, including many past presidents.

South Carolina was represented by the President and President-elect at the Conference of Presidents and Presidents-elect in Chicago in November, 1950. Because of the emphasis placed on Public Relations in South Carolina, your President was asked to serve on the Public Relations panel at this Conference. A review of this talk was published in the December issue of the National Bulletin. Many worthwhile contacts with national and state leaders were made and much valuable information was disseminated to the State Auxiliaries. The program of work outlined at the Conference has been reflected in the activities of the State and County Auxiliaries. You have heard the excellent reports of the officers, committee chairmen and county presidents and from these reports your President is proud to review some of the outstanding achievements in auxiliary work this year.

MEDICAL LEGISLATION: Due to the current hazards of medical legislation and to the emphasis placed on the importance of this field by national and the medical profession, we have been especially active in this work. The program of medical legislation was in line with the program presented by the National Legislative Chairman and the objectives of the National Education Campaign of the American Medical Association. All County Auxiliaries were informed of the status of medical legislation throughout the year. An ardent and extensive campaign against compulsory health insurance was continued and many requests were made for endorsements. Radio talks were given by our State Legislative Chairman and members of the medical profession to stimulate interest and action in the fight against socialized medicine. Notices of these radio programs were mailed to 200 labor leaders, welfare workers and leaders of civic organizations. Talks were made to lay groups and County Auxiliaries by the President and auxiliary members. Excerpts from these talks were published in the newspapers and in the Secretary's Letter No. 173 of the American Medical Association. One of the largest auxiliaries secured Miss Mary McGinn Taylor, of the Women's Division of the National Education Campaign, as a speaker. All County Presidents, Chairmen of Legislation and leaders of women's organizations were invited to hear her talk on "Socialized Medicine—A Sellout of the Country's Future." Endorsements or recommendations were received from twelve local organizations and the following state organizations: The Garden Clubs of S. C., S. C. Chapter of the Daughters of 1812, and the S. C. Chapter of

MILD HYPERTROPHIC ARTHRITIS OF LUMBOSACRAL JOINT
and
TENDERNESS OF ERECTOR SPINAE MUSCLES



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the Daughters of the American Revolution. Particularly aggressive work was done with the S. C. Nurses's Association, the S. C. Congress of Parents and Teachers, and the State Branch of the American Association of University Women. The results were favorable only from an educational standpoint. The untiring and relentless efforts of our State Chairman of Legislation directed by the Women's Division of the National Education Campaign are largely responsible for the excellent part South Carolina has played in the fight for freedom of medicine.

PUBLIC RELATIONS: Your State Auxiliary was represented by the President or an appointee at the following eight state meetings: Nurses's Association, Council for the Common Good, Heart Association, Mental and Social Hygiene Society, Tuberculosis Association (one auxiliary member on the State Board), National Foundation of Infantile Paralysis, White House Conference for Children and Youth, and the Academy of General Practitioners. Your President has been asked to serve on the Committee of Resolutions at the National Convention in Atlantic City in June. At this meeting, a report of the State Auxiliary will be given. The State Chairman of Public Relations stressed an adequate civil defense program. An active nurse recruitment campaign was conducted throughout the state. Each County Auxiliary contributed to the educational, financial and social welfare of the nursing profession. Two County Auxiliaries give nurses's scholarships. Each County Auxiliary was asked to choose and carry out the health project most suited to the needs of its community, thus taking care of the most urgent needs of the community while providing a more varied health program. The highlight of many County Auxiliary programs was health talks given by outstanding leaders in their chosen fields. Time will not permit the covering of all health programs, however, some of the most important are: The presentation of an Institute on Human Growth and Development, the participation in work of the South Carolina Red Cross Blood Center (one auxiliary has 58 volunteers in this service), the purchasing of health bonds, child health and juvenile delinquency work, V. D. and Cancer Detection Clinics, assistance to indigent doctor's family, participation in all philanthropic drives and maternal welfare. Orientation courses were given by many auxiliaries.

NATIONAL BULLETIN: The value of this periodical as a channel of expression and an exchange of ideas has been emphasized. The use of the Bulletin for reference material has been encouraged. There are 86 subscribers and many more readers in our state.

TODAY'S HEALTH: We have secured 113 subscriptions. This magazine appears in many doctor's and dentist's offices, school libraries, and homes. One County Auxiliary can boast of a 100% subscription record this year.

STUDENT LOAN FUND: This fund was set up for the medical education of sons and daughters of deceased physicians in South Carolina. A balance of $6,437.71 is on hand; $3,330.00 of which is invested in series "F" government bonds.

STUDENT NURSES'S LOAN FUND: This fund was established two years ago to assist girls desiring training. Two girls are using this source of aid this year for the first time. $1,495.25 is reported in the treasury. This fund has proved an excellent stimulus for nurse recruitment.

HISTORY AND ARCHIVES: This year's record shows 55 biographies of deceased South Carolina physicians, making a total compilation of 507. 29 of the 55 were from one County Auxiliary. A History of the Woman's Auxiliary to the South Carolina Medical Association has been written and will be placed in state and national archives. Papers pertaining to research and romance of medicine have been written by auxiliary members and placed in state and southern archives. A permanent file for the preservation of auxiliary records was purchased this year and placed in the Library of the Medical College of the State of South Carolina.

PUBLICITY AND PRESS: South Carolina has two organs of publicity, the State Auxiliary Bulletin and space in the Journal of the South Carolina Medical Association. These publications have printed articles from the national, state and county auxiliaries.

NEW COMMITTEES: For the first time a Finance Committee has been formed as a standing committee to evaluate our financial needs and to set up a proposed budget for the State Auxiliary. This budget, adopted by the Executive Board, was published in the Auxiliary Bulletin. A Committee of Instructions has been formed for the purpose of giving instructions concerning the duties and responsibilities of office to officer personnel and potential officer personnel. The chairman and members of this committee are appointed from the list of past presidents.

DOCTOR'S DAY: Appropriate recognition to the medical profession was given March 30, 1951, by all County Auxiliaries. Throughout the state, our doctors were honored by radio talks, newspaper editorials, banquets, luncheons, coffees, and boutonnieres of red carnations.

CONVENTION: The Twenty-Sixth Annual Convention is a success and your President wishes to thank our Convention Chairman and her able committees for their consideration of our comfort and pleasure, each doctor's wife for coming, and our National Guests for their presence and participation on our state program. Our thanks are also extended to the President and President-elect of the South Carolina Medical Association and the members of the Advisory Council who shared their Convention time with us. It is the desire of your President that South Carolina will be well represented at the National Convention in Atlantic City in June.

As I take my place among that grand group of Past Presidents, my appreciation is extended to each of you for the honor and privilege of serving as your State President. The degree of success that has been reached is due to the combined efforts of the Executive Board and the individual auxiliary member. It is my sincere hope that the Woman's Auxiliary to the South Carolina Medical Association has made a distinct contribution to the aims and purposes of the medical auxiliary program.

Respectfully submitted:
Roberta T. Burnside, Pres.

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